
| RESEARCH ARTICLE

Private Clinic Integration through Hybrid Models within Government Hospitals: A Systematic Review of Funding Efficiency and Quality-of-Care Outcomes with Policy Implications for Oman

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| ABSTRACT

This systematic review examined whether integrating private or semi-private clinics within government hospitals can improve funding efficiency and quality of care compared with the normal public healthcare system, with specific policy implications for Oman. Guided by PRISMA 2020 principles, 43 records were identified from Google Scholar, PubMed, and Science Direct; after duplicate removal, screening, retrieval, and eligibility assessment, 27 studies were included in the final synthesis. Evidence from international and Gulf healthcare systems indicates that public-private partnership models may improve access, waiting time, patient satisfaction, infrastructure use, and specialist service capacity when they are supported by strong governance, transparent contracts, regulated pricing, shared reporting systems, and quality assurance. However, the financial evidence is less conclusive, and poorly regulated models may increase inequity, out-of-pocket costs, administrative complexity, workforce conflict, and fragmentation of care. Health indicators in Oman include a budget of about OMR 1 billion to the Ministry of Health in 2026, an increase in workforce of 37,732 employees in 2021 to 44,298 in 2025 (OMR), 71.4% Omanisation, and a significant increase in the value of the major pharmaceutical tenders of OMR 149 million in 2023 to OMR 202 million in 2025/2026. The signs of quality also indicate the willingness to change including specialist waiting-time reduction, 45,000 virtual consultations, 65% of PACS/ Shifa integration and 40-15 minutes of pharmacy waiting-time. The review concludes that Oman is not able to transition to national implementation. Instead, a 12-month pilot of the Ministry of selected government hospitals is proposed in line with Oman Vision 2040, controlled pricing, QAC supervision, Shifa/PACS implementation, public-access security, and baseline, 6 months and twelve-month assessment with the potential evidence-based scale-up to national-wide implementation.

| KEYWORDS

Private Clinic Integration; Hybrid Models; Government Hospitals; Systematic Review; Funding Efficiency; Quality-of-Care Outcomes; Policy Implications; Oman

| ARTICLE INFORMATION

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1. Introduction:

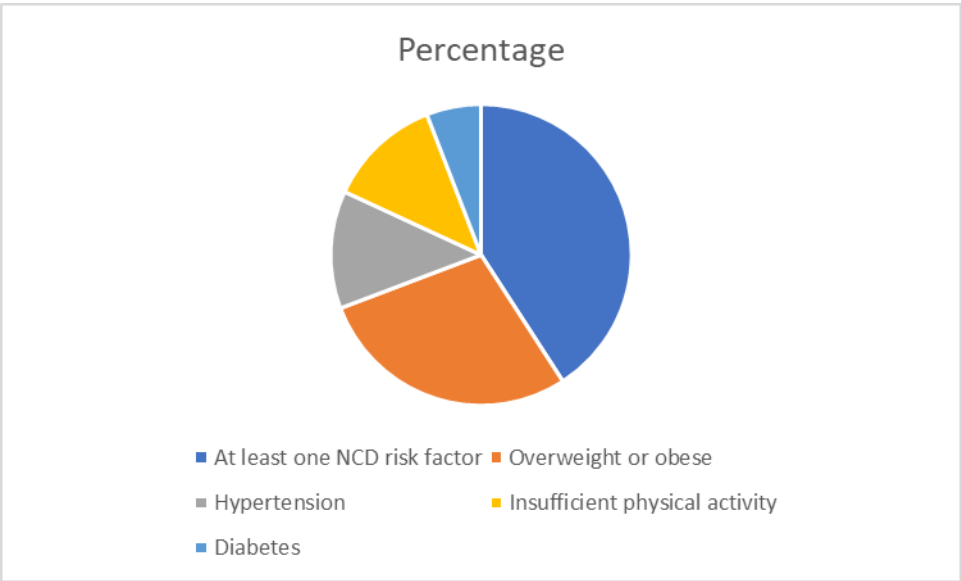
Healthcare systems worldwide are under increasing pressure to provide accessible, high quality, equitable, and financially sustainable services while responding to rising demand, technological advancement, workforce shortages, and the growing burden of chronic diseases. Public health care systems are still needed due to their safeguarding of universal access and mitigating the financial access barriers to care, but most governments are now obliged to find new service-delivery models that

enhance efficiency without affecting quality, safety, or equity. The given problem is especially topical to the hospital-based care in case the emergency services, the special consultations, diagnostics, medications, surgeries, rehabilitation and high technologies occupy a considerable portion of health spending. The evidence in the literature on health-financing supports the idea that the sustainability of healthcare does not solely rely on the increase in expenditure, but also on the improvement of efficiency, value creation, resource allocation, and resiliency of the system under the economic and service-demand conditions (Mohamed et al., 2025; Sahoo et al., 2023; Shimul et al., 2023).

Close to sustainable healthcare reform in Oman is the Oman vision 2040 that provides a focus on quality of life, institutional efficiency, sustainable development and a health system performing highly. The Ministry of Health has made major strides in terms of growth in services, improved decentralization, digital health and improved patient safety, yet the service demands remain high. According to the 2025 national health-sector data, 93.1% of the adults were at risk of at least one non-communicable disease, 64.7% were overweight or obese, 28.8% were hypertensive, 13.4% were diabetic, and 27.9% were not performing the recommended amounts of physical activity. These figures indicate that in the future, there will be a significant burden on the outpatient clinics, specialist services, diagnostics, pharmacy services, long-term follow-up, and rehabilitation. This is significant because with non-communicable diseases, constant attention, regular probe, medication compliance, and incorporation of specialist input are required, which further burdens government hospitals and public funding mechanisms (Lai et al., 2024; Mohamed et al., 2025).

The size of the spending of the Oman state also demonstrates the importance of efficiency. The Ministry of Health budget in 2026 is approximately OMR 1 billion and the health workforce increased by approximately 17 percent (37,732 employees in 2021 to 44,298 employees in 2025). In 2025, the Omanisation stood at 71.4% as well which is national investment in human resources and workforce sustainability. In the meantime, the spending on pharmaceuticals and medical-supplies is a serious policy question, and the unified tender of medicines and sera is OMR 202 million in 20252026, which is 4-5 times higher than OMR 149 million in 2023. Although the Ministry has managed to save OMR 27.4 million in both national and GCC unified tenders, these indicators show that financial sustainability must be enhanced with the help of resource use models, procurement efficiency models, and redesign of the services (Al Subhi, 2022; Lai et al., 2024; Nair et al., 2024).

1. Graph: Oman Non-Communicable Disease Risk Indicators:



This graph supports the recommendation to begin private clinic integration with chronic disease and outpatient specialist services.

The models of the public-private partnership have therefore gained international attention as possible solutions to increase healthcare capacity, flexibility and responsiveness of services. There is systematic evidence that the partnerships between the public and the private can enhance infrastructures, increase services provision, and enhance the performance of operations in

case of effective governance, transparency of contracts, measurement of indicators, and oversight of the activities by the state (Basabih et al., 2022; Dove et al., 2025). The literature does warn, though, that when the involvement of the private sector is improperly regulated, it can lead to increased inequity, higher patient spending, less accountability, and tensions between the commercial incentive and social-interest objectives (Kumar, 2022; Machta et al., 2019). Consequently, the incorporation of the privately owned clinics into the government hospitals should not be perceived as privatization, but as a controlled hybrid model, which has to be carefully measured with respect to funding efficiency and quality-of-care results.

This model is particularly relevant to the case of Oman as the government hospitals already demonstrate some tangible improvements because of service redesign. Genetic clinics, endocrinology, chemotherapy services, spinal surgery and rehabilitation, in 2025, the waiting time was reduced to 3 weeks, 2 weeks and 10 days, respectively, 8 weeks, 6 weeks, 4 weeks and 12 weeks respectively. The waiting time in emergency departments also reduced to as little as 40 percent and governorate emergency congestion was reduced by 30 to 40 percent. The accessibility and efficiency have also been enhanced by the digital transformation: 40 minutes to 15 minutes QR-code medication dispensing decreased the waiting time in pharmacies, 45,000 virtual consultations were offered, 65 percent of health institutions were included into PACS/Shifa systems, 57 out of over 80 services were automated, and over 200,000 electronic requests were processed. Such achievements suggest that Oman has the institutional and digital ability to test the meticulously planned hybrid models (Al-Jabri et al., 2021; Lai et al., 2024; Mohamed et al., 2025; Quality Assurance Center, 2024).

This study systematically examines whether integrating private clinics within government hospitals can improve funding efficiency and quality of care compared with the traditional public healthcare model. The study is important because Oman requires evidence-based policy options that can reduce waiting times, improve patient satisfaction, optimize hospital infrastructure, generate sustainable revenue, protect equity, and support Oman Vision 2040. At the same time, the model must be evaluated cautiously because international evidence shows that private-sector integration can only support public healthcare goals when governance, regulation, quality assurance, affordability, and accountability are clearly secured (Basabih et al., 2022; Dove et al., 2025; Kumar, 2022; Machta et al., 2019).

1.1 Background of Public Healthcare Systems Globally

The purpose of the public healthcare systems is to protect the health of the population, reduce the financial barrier to healthcare and ensure that the required services can be provided to all people regardless of the income, age, social status, or geographical location. Governments are the main custodians of health systems in the world because healthcare is not only a personal service but also a social good, which concerns the social stability, economic output, equity and national growth. Nonetheless, the challenges that are facing the public healthcare systems are the upsurge of costs, the ageing of the population, non-communicable diseases, development of medical technologies, shortage of workers, and increasing demands of access to high-quality and timely care. They are particularly intense within the framework of publicly funded systems as demand is usually higher than the financial resources available, and it creates a critical policy challenge of how to guarantee universal access and improve efficiency and quality (Mohamed et al., 2025; Sahoo et al., 2023; Shimul et al., 2023).

The developing and the high-income health systems are experiencing this issue. Hospitals are particularly impacted as they are supposed to offer emergency care, specialist consultations, diagnostics, surgery, rehabilitation, pharmacy services, teaching, and referral care under a single institutional framework. This has seen an emphasis on the hospital efficiency in the health policy agenda. The effectiveness of converting resources into patient-centered, timely and safe outcomes is now a new measure of modern hospital performance, rather than the amount of money expended. The typical measures are waiting time, bed utilization, expenses per episode, clinical results, patient satisfaction, preventable admissions, and operational efficiency (Barraza-Lloréns et al., 2025; Lucifora, 2023). Thus, health care reform should address the issues of both financial efficiency and quality of care as opposed to concentrating on cost reduction.

1.2 Increasing Healthcare Costs and Pressure on Government Hospitals

One of the most potent forces behind reform across the border is the increasing cost of healthcare. The health systems need to invest in new medicines, digital infrastructure, diagnostic devices, intensive care, development of specialist workforce, chronic disease control and emergency preparedness. In the meantime, the need in the services is increasing in most countries because of the constant necessity to follow-up on chronic illnesses; test them in laboratories, offer multidisciplinary treatment, drugs, rehabilitation, and consultations with specialists. Health expenditure is also threatened by economic shocks due to their potential

to affect the government revenues, household affordability, and resilience to long-term financing (Mohamed et al., 2025; Sahoo et al., 2023; Shimul et al., 2023).

These forces are expressed through national funding and growth of the health sector in Oman. In the Ministry of Health 2026 budget, it was estimated that the government is putting high dedication to public healthcare and service development with an approximate of OMR 1 billion of the ministry budget allocation. The pharmaceuticals investment was also boosted with the unified tender on medicines and sera rising to OMR 202 million by 2025/2026, compared to OMR 149 million in 2023. In the meantime, national and GCC combined tenders also saved OMR 27.4 million over OMR 20.4 million in 2023, indicating that the efficiency and expenditure control is already a high policy agenda. System expansion is also evidenced in workforce expansion as the number of Ministry of Health employees expanded at least between 37,732 in 2021 to 44,298 in 2025 and Omanisation achieved 71.4. These data indicate that Oman is putting a lot of funds in healthcare but they also reveal the necessity of sustainable financing, effective resource distribution, and new models of services (Al Subhi, 2022; Lai et al., 2024).

1.3 Non-Communicable Disease Burden and Service Demand in Oman:

The rising pressure of non-communicable diseases is an extremely powerful factor affecting the demand in the hospitals in Oman. A national survey of non-communicable diseases in 2025 revealed that 93.1% of adults reported having at least one risk factor, 64.7% were overweight or obese, 28.8% hypertensive, 13.4% diabetic, and 27.9% not getting the recommended amount of exercise. These statistics are very significant because chronic diseases require numerous outpatient visits, administration of drugs, tests, lifestyle counseling, referral to specialists, and follow-ups. They also boost cardiology, endocrinology, nephrology, ophthalmology, rehabilitation, pharmacy, laboratory, and radiology services. Therefore, the chronic disease burden continues to place the strain on the government hospitals and require service-delivery models that will maximize patient flow and reduce wait times, and leverage infrastructure to its full potential without sacrificing equity and safety (Lai et al., 2024; Mohamed et al., 2025).

Oman has already shown that the systematic enhancement of services can yield quantifiable benefits. The genetic clinic, endocrinology, chemotherapy services, spinal surgery and rehabilitation services saw 3 weeks, 2 weeks, 10 days, 6 weeks and 2 weeks respectively in 2025 (compared with 8 weeks, 6 weeks, 4 weeks, 12 weeks and 6 weeks respectively in 2024). The waiting time in emergency departments was also reduced to a maximum of 40% compared to 2024, and emergency congestion in governorates fell by 30-40% with the addition of service. These gains suggest that operational redesign can be used to improve access and quality. The continuation of these gains however necessitates more models that can increase the capacity of specialists, enhance utilization of hospital facilities and financial sustainability.

1.4 Growth of Public-Private Partnership Models in Healthcare

The models of public-private partnerships have gone international since governments are more and more aware that the public systems might not be in a position to address all the healthcare requirements. These models might include outsourcing, co-location, contracting, privatization of the management of public facilities, joint diagnostic platforms, privatization of provision of publicly funded services, and inclusion of privately operated clinics within the government hospitals. The systematic reviews show that the partnerships between the state and companies can improve the state of the infrastructure, the availability of services, the flexibility of operations, and their accessibility with the help of good governance, effective contracts, performance indicators, and alignment with the objectives of public health (Basabih et al., 2022; Dove et al., 2025).

However, the literature also demonstrates that not all public-private partnerships prove successful. Poor models may result in inequity, increased patient costs, less accountability, service fragmentation or conflict of commercial interests with the objectives of the public interest. That is why the move towards the introduction of the private sector in the government hospitals cannot be regarded as a simple privatization. Privatization is the act of handing over the responsibility or ownership to the state and integration can preserve the care of the state but with the capability of the private sector but by regulation and quality control. The international experience of the vertical integration also shows that integration may affect the efficiency, quality, and patient-centered outcomes, but with different effects based on the governance, incentives, information systems, and clinical accountability (Kumar, 2022; Machta et al., 2019). Hence, whenever a proposal to bring the private clinics on board in government hospitals is suggested, it should be considered in terms of results and not assumptions.

1.5 Concept of Integrating Private Clinics within Government Hospitals

An example of a care-delivery model is the idea of integrating the private clinics into government hospitals, whereby the services of a private or semi-private clinic are delivered within, next to, or formally part of the facilities of a government hospital. This model can include after-hours specialist clinics, optional outpatient consultations, private diagnostic services, and rehabilitation clinics, follow-up of chronic diseases or systematic use of the capacity of the private to eradicate public waiting lists. It is not designed to replace the state healthcare system, but rather to streamline the utilization of the existing hospital facilities, access to specialists, reduce wait times, provide some form of controlled revenue and patient choice that is under government control.

The model can be directly applied to efficiency of funding. Funding efficiency is the capacity to utilize resources in the best way possible to create the best health value. This involves better utilization of equipment and clinic space, less waste of money, generation of revenue without adversely affecting access by the people, cutting waste of referrals, enhancing operational productivity, and financial sustainability in the long-term in hospitals. The fact that there is already evidence on the subject of Oman already indicates the need to focus on the efficiency of the hospitals and the optimization of the resources, in particular, because of the need to meet the increasing demand without compromising the quality of the services, which is the role of local hospitals (Al Subhi, 2022). The evidence on the hospital level on an international level proves that efficiency of the hospital should be measured together with the quality since the low-cost model is not efficient when it results in low outcomes, insecure care, or low patient satisfaction (Barraza-Lloréns et al., 2025).

Quality of care is also applicable to the model. Quality includes patient safety, timeliness, accessibility, effectiveness, continuity, clinical outcomes, and patient experience. Quality Assurance Center in Oman is a national reference body in the sphere of healthcare quality and patient safety the functions of which are interrelated with accreditation, development of standards, assessment of clinical performance and patient safety, and risk management (Quality Assurance Center, 2024). In Oman, surveys also reveal that patient and health care professional perceptions are also relevant to the quality and safety measurement in healthcare facilities (Al-Jabri et al., 2021). In such a way, the merger of the private clinic must be considered not only in terms of the financial performance, but also in terms of the waiting time reduction, patient satisfaction, safety rates, continuity of the therapies, and equity.

1.6 Importance of the Model Internationally and in Gulf Countries

The concept of the integration of the private sector gains relevance in the Gulf countries as the health systems are rapidly changing. The Gulf governments are expanding universal health coverage, developing insurance plans, increasing the role of the private sector, investing in the digital health, localization of specialized services, and aiming at greater efficiency in government spending. The healthcare financing reforms in Saudi Arabia reflect the regional concern with sustainable financing, strategic purchasing, and involvement of the private sector as potential ways of enhancing the performance of the health-system (Nair et al., 2024). International experience also demonstrates that, with certain governance, reporting, accountability, and quality frameworks, the collaboration of the public and the private can be helpful in attaining the objectives of the public health (Basabih et al., 2022; Dove et al., 2025).

Policy lessons that are useful can also be found out of the Gulf. The case of the Jordanian laboratory collaboration between the government and the private sector in the COVID-19 pandemic showed how the potential of the private sector could be used to advantage the national response to the crisis in case the head of the state (Abu-Dayyeh et al., 2023) organize it. The success of the role of the private sector in the field of tuberculosis treatment in India also demonstrates that the role of the private sector can be used to achieve positive health outcomes in the country in case the effective referral routes, quality indicators, reporting mechanisms, and equity goals are developed (Rakesh and Shannawaz, 2024; Suseela and Shannawaz, 2023). These illustrations are not exactly the Omani hospital setting, but they support the notion that the introduction of the private sector can prove beneficial when incorporated into a regulated public health system.

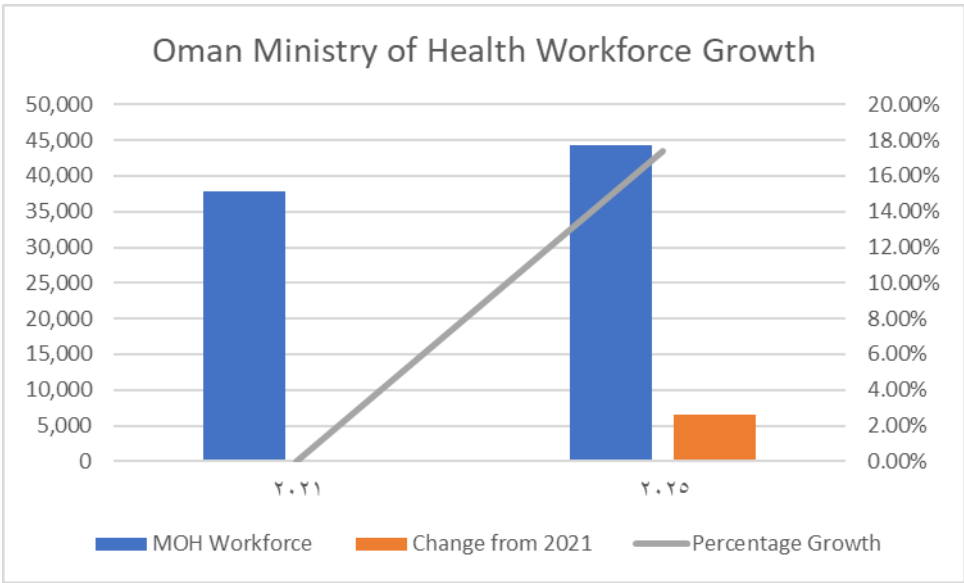
1.7 Current Healthcare Context in Oman

Since the establishment of the Ministry of Health in 1970, Oman has achieved a lot in the development of the health-sector. The nation has increased hospitals, health centres, specialist, workforce training, digital health, pharmaceutical security, and patient-safety systems. Great results in 2025 included the first heart transplant in Oman, 38 kidney transplants, 16 liver transplants, 113 corneal transplants, more day-care oncology services (250 more patients per month), and a reduction in the duration of

radiotherapy sessions by 35. These achievements are signs of the growing capacity of the Oman public health system to localise more services that are advanced and reduce the dependence on external referral pathways.

Another valuable basis on which integration is possible is digital transformation. The use of QR-codes in medication dispensing in 2025 was discovered to reduce waiting time in pharmacies by 40 minutes to 15 minutes. The virtual consultations went to 45,000, where the aim is 70,000. Approximately 65% of health facilities were connected to the PACS/Shifa systems, and it is planned to achieve 90%. Telemedicine expanded in six specialties and was used to follow-up with over 1,200 patients remotely. Automation of 57 of over 80 services in the Ministry, which is 71% automation, and an electronic response of over 200, 000 requests were achieved. These statistics depict that Oman is on the way of a digitally and performance-based health system. This is significant since integration of the private clinics would demand shared health records, electronic referral, billing controls, outcome dashboards, patient feedback systems, and transparent monitoring of performance (Lai et al., 2024; Mohamed et al., 2025).

2. Graph 1: Oman Ministry of Health Workforce Growth



This graph supports the argument that Oman needs efficient workforce planning before private clinic integration.

1.8 Gap in Evidence and Policy Requirement

Despite the fact that models of public and private partnerships have become an international issue, there is a specific gap in evidence in the form of integration of private clinics, either physically or operationally, in government hospitals. The reviewed literature is rich in information on general public-private partnerships, outsourcing, hospital construction, vertical integration, the specific involvement of the private sector in disease-specific matters, or privately funded the same. Such works may be quite informative, but the majority of them do not mention the model of functioning of the private clinics in the context of the state hospital directly. Systematic reviews show that the benefits of public-private partnerships can be achieved, but the outcome depends on the quality of governance, incentives, contract design, monitoring systems, equity protection, and local capacity of institutions (Basabih et al., 2022; Dove et al., 2025; Machta et al., 2019).

This is a policy gap that is directly of policy relevance to Oman. The country is investing in universal health coverage, digitalization, decentralized planning, pharmaceutical security, and development of health workforce, patient safety and quality assurance. Meanwhile, the need in specialist care is growing, the pressure of chronic diseases grows, and the financial sustainability is gaining significance. A model whereby private clinics are incorporated would assist in minimizing the waiting lists, creating a controlled revenue stream, improving the infrastructure, increasing access to the clinics after the hours and minimizing unwarranted overseas referrals. However, unless it is developed evidence-based, it could also be used to contribute to inequity, patient expenses, administrative complexity, decrease the morale of the public sector or cause conflict of interest.

Therefore, the systematic review is necessary to generalize the evidence on the international and Gulf levels and to translate it into the policy recommendations that can be applied to Oman.

1.9 Research Problem

The research problem is that the government hospitals in Oman have increasing needs of specialists services, chronic diseases treatment, advanced diagnostics, digital health infrastructure, human resources development, and financial sustainability with little evidence on how the private clinics can be integrated in the work of the government hospitals. The international literature suggests that the public-private partnership has the potential to increase efficiency, access, infrastructure, and service availability, but it also demonstrates the risks related to equity, governance, financial burden, accountability, and quality variability (Basabih et al., 2022; Dove et al., 2025; Kumar, 2022). Proper public stewardship, national digital transformation, country wide quality-assurance systems, and Oman Vision 2040 are all an opportunity to think about hybrid models in Oman. Decision-makers before implementation require first, policy-oriented evidence, which is systematic. The main issue here is thus the lack of a synthesized evidence base that would allow to assess whether the integration of private clinics in the government hospitals can result in a better funding efficiency and quality of care than the traditional model of the public healthcare system.

1.10 Research Aim:

The aim of this study is to systematically review international and Gulf-region evidence on whether integrating private clinics within government hospitals improves funding efficiency and quality of care compared with the normal public healthcare system, and to identify evidence-based policy implications for Oman. The study also aims to link the findings to Oman Vision 2040 by proposing a feasible pilot pathway that supports financial sustainability, service accessibility, patient satisfaction, and safe, equitable healthcare delivery.

1.11 Research Question:

Does the integration of private clinics within government hospitals improve funding efficiency and quality of care compared with the normal public healthcare system?

This question is important because government hospitals in Oman face increasing pressure from rising healthcare costs, chronic disease burden, specialist-service demand, workforce expansion, and patient expectations. The question directly examines whether a hybrid public-private model can improve financial sustainability and healthcare quality without weakening equity, accessibility, or accountability. It is also relevant to Oman Vision 2040, which emphasizes efficient governance, sustainable health financing, high-quality services, and improved quality of life.

1.12 Research Objectives:

1. To assess the effect of integrating private clinics within government hospitals on funding efficiency, including cost-effectiveness, revenue generation, resource utilization, and financial sustainability.
2. To evaluate the impact of private clinic integration on quality-of-care outcomes, including waiting time, patient satisfaction, accessibility, patient safety, continuity of care, and clinical outcomes.
3. To identify evidence-based policy implications and propose a structured pilot pathway for implementing private clinic integration within government hospitals in Oman.

2. Chapter Two: Methodology

2.1 Introduction to the Methodology:

This chapter presents the methodological framework for conducting a systematic review on private clinic integration within government hospitals and comparable public-private healthcare integration models. This methodology aims at making the review transparent, reproducible and academically sound as well as relevant to the health-policy decision making in Oman. The research question is whether the incorporation of the private clinics into the government hospitals is able to enhance effectiveness of funding and care provision as opposed to the normal system of public healthcare. It is a challenge in health-system question because it entails financing, governance, service delivery, patient experience, quality assurance, and equity as opposed to one single clinical intervention.

The systematic review design fits well due to the distribution of evidence on the integration of public and private healthcare in various countries, healthcare systems, models of partnership, and outcome measures. The prior literature has determined that the success of public-private partnerships in healthcare is heterogeneous and that the quality of governance, contract design and financing mechanisms, provider incentives, regulation and monitoring frameworks (Basabih et al., 2022; Dove et al., 2025) is the key determinant of success. There is also evidence about vertical integration that suggests that integration can have a positive effect on efficiency, quality, and patient-centered outcomes, but the direction and the magnitude of these effects depend on the organizational context and implementation design (Machta et al., 2019). Hence, the review will not presume that integration by the private sector is necessarily good or bad. Instead, it will systematically search, assess, retrieve, compare and synthesize evidence to determine, under what conditions integrated models can optimize the efficiency and quality of funding.

The methodology is also intended to enable translation of policies in Oman specific. Some of the major changes in healthcare system in Oman include digital transformation, decentralization, quality assurance, health-system performance assessment and expansion of services. These priorities are in line with Oman Vision 2040 that is concentrating on sustainable development, good governance, good services and improved living conditions. The existing Omani evidence shows the importance of hospital efficiency, patient safety, decentralized planning, and health-system reform as the factors that can improve healthcare performance (Allawati et al., 2026; Lai et al., 2024; Al-Jabri et al., 2021). As such, the review will not just highlight the international findings, but also explain how they applied to the context of the Ministry of Health of Oman.

2.2 Study Design:

A systematic review design used in this study. A systematic review is suitable as it is a systematic and pre-determined process of searching, selecting, evaluating and synthesizing research evidence. It will examine the current literature on integration of private clinics, hospital-based public-private partnerships, hybrid healthcare models, role of the private sector, co-located healthcare services, acquisition of private capacity by a government, vertical integration, and other models as implemented in governmental hospital systems.

Quantitative and qualitative data will also be included in the review as the concept of the public- private healthcare integration has both outcomes to measure and factors to implement. Quantitative research can give information on the cost, revenue generation, waiting time, service utilization, patient satisfaction scores, and clinical outcomes. Qualitative and policy research may provide information on governance, regulation, the experience of the stakeholders, obstacles to implementation, accountability, and equity risk. There will also be economic assessments; mixed-method research, policy assessments and empirical case research as long as they are relevant to the review question.

In the review, models conceptually related to integrating the private clinics into the government hospitals will be considered. Since the particular terminology of the integration of private clinics into government hospitals may not be used consistently throughout the literature, the review will encompass similar models if they involve the systematized collaboration between governmental healthcare facilities and the providers that are active in the private sector. This is needed since it would undermine the evidence base to rule out studies that employ other terms. However, the review will remain focused on government-led or public hospital-relevant service models, not private healthcare in isolation.

2.3 Reporting Guideline and Protocol:

The review will follow the PRISMA 2020 reporting format to allow the transparency in the identification, screening, eligibility assessment, inclusion and synthesis of the studies. PRISMA will be used in presenting the research question, the eligibility criteria, databases, search strategy, screening process, full-text assessment, the reasons why some studies were excluded, final included studies, quality appraisal, data extraction and synthesis. This is important as the indications of the public- private partnership might be difficult to compare due to their terminologies, financing models in healthcare, service models, and national contexts.

A guideline on review will be prepared prior to the screening. The protocol will include the research question, objectives, search strategy, inclusion and exclusion criteria, databases, screening process, appraisal tool, data-extraction framework, and synthesis method. The development of a protocol minimizes the chances of subjective interpretation and enhances the methodological plausibility. Due to the possibility, the protocol ought to be enrolled in PROSPERO prior to complete screening and extraction.

Registration is also advisable as this is a policy-sensitized issue, and conclusions can be used to drive subsequent policies regarding government hospitals, financing, involvement of the private sector and patient access.

2.4 Review Question and PICO Framework:

The main review question is: ***Does the integration of private clinics within government hospitals improve funding efficiency and quality of care compared with the standard public healthcare system?***

An adapted PICO model will be applied since it is not a clinical trial but a health-system intervention. The patients, government hospitals, public healthcare institutions, health care workers and health systems are the population that is affected by the public-private integration. The intervention is the amalgamation of the privately run clinics in the government hospitals or suchlike models of the public-private healthcare. The traditional public healthcare model, pre-integration baseline or non-integrated public hospital service is the comparator. The results are cost-effectiveness of funding and quality of care.

3. Table 2.1: PICO Framework:

PICO Element	Application in This Review
Population	Patients, government hospitals, public healthcare institutions, healthcare workers, and health systems affected by integrated public-private healthcare models.
Intervention	Integration of private clinics within government hospitals or comparable models such as hospital PPPs, co-located services, public purchasing of private capacity, private diagnostic integration, and hybrid specialist clinics.
Comparator	Normal public healthcare system, traditional government hospital services, non-integrated public services, or pre-integration baseline.
Outcomes	Funding efficiency and quality-of-care outcomes, including cost-effectiveness, revenue generation, resource utilisation, waiting time, patient satisfaction, accessibility, safety, continuity, and clinical outcomes.
Context	International evidence, Gulf-region evidence, and Oman-relevant health-system reform evidence.

This framework is appropriate as it gives the review the opportunity to incorporate studies representing various health systems and still be directly relevant to the research question. For example, the evidence of public-private partnership in the hospital can be applied to inform policy and financing decisions, but the evidence on healthcare financing in the Gulf region can be applied to compare policies across regions (Basabih et al., 2022; Nair et al., 2024). The relevance of international lessons to the Omani context will be assessed by using Oman-specific studies on the effectiveness of hospitals, patient safety, decentralization, and health-system reform (Allawati et al., 2026; Lai et al., 2024).

2.5 Eligibility Criteria:

The screening process will be done regularly by the use of inclusion and exclusion criteria. The literature published in 2019-2026 will be included in the analysis because this period reflects the recent changes in healthcare, digital transformation, post-pandemic system pressures, and current models of public-private collaboration. Articles that were published prior to 2019 can be considered as long as they are highly relevant foundational systematic reviews, but preference will be given to recent evidence.

Table 2.2: Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
Studies published in English from 2019 to 2026.	Editorials, opinion papers, commentaries, and news reports without empirical or policy evidence.
Studies examining public–private healthcare integration, hospital PPPs, private-sector engagement, vertical integration, hybrid healthcare models, or government-led private service delivery.	Studies unrelated to healthcare delivery, hospital services, healthcare financing, and quality of care, governance, or public–private integration.
Studies reporting funding-efficiency, quality-of-care, access, patient experience, governance, implementation, or policy outcomes.	Studies without measurable outcomes, clear implementation findings, or analytical relevance to the review question.
International, Gulf-region, and Oman-related studies relevant to healthcare reform and public–private models.	Studies focusing only on private healthcare without connection to public systems, government stewardship, or public health goals.
Systematic reviews, scoping reviews, observational studies, qualitative studies, mixed-methods studies, economic evaluations, policy evaluations, and empirical case studies.	Duplicate reports, inaccessible full texts, non-healthcare studies, and studies with insufficient methodological detail.

These are requirements that are intended to provide policy relevancy and academic rigour. The review will not include studies merely because they refer to the private sector. The research must give evidence about healthcare integration, the efficiency of funding, quality, access, governance, or relevance to the public sector. This difference is important since the research question is not about the subject of the private healthcare as a separate market but about the subject of the integrated delivery of public–privacy services in or near government hospitals.

2.6 Databases and Information Sources:

The literature review will include searching of large academic databases pertaining to the sphere of healthcare management, public health, health policy, health economics, medicine, and service delivery. The databases that will be selected are PubMed, Scopus, Web of science, Science Direct and Google Scholar. PubMed will be used to determine biomedical and public health literature. Scopus and Web of science will provide multidisciplinary evidence on the topic of health policy, management, public administration, and economics. The literature on healthcare financing, hospital management, and service delivery will be accessed with the help of Science Direct. To find policy-relevant and cross-disciplinary studies not found in the primary databases, Google Scholar will serve as a secondary source.

Key papers and reviews will also be used to conduct backward and forward citation searching. This is required because a number of different names including can index the research on the subject of public-private partnership: healthcare financing, hospital management, involvement of the private sector, outsourcing, integration, governance, service delivery and quality improvement. The use of citation management will be applicable to find the right studies that will be connected to the topic of public-private collaboration, vertical integration, healthcare financing, and hospital performance (Basabih et al., 2022; Dove et al., 2025; Machta et al., 2019; Nair et al., 2024).

2.7 Search Strategy:

The search strategy will be a combination of the terms associated with the integration of the private sector, public hospitals, public-private partnerships, financing efficiency, quality of care, and Gulf/Oman context. The Boolean operators used to relate search terms. Each database customized to search it due to various differences in databases in terms of indexing systems, search capabilities and subject headings.

4. Table 2.3: Search Concepts and Example Search Terms:

Search Concept	Search Terms
Private-sector integration	"private clinic integration", "private sector engagement", "private healthcare integration", "co-located private clinics", "hybrid healthcare model"
Public healthcare setting	"government hospitals", "public hospitals", "public healthcare system", "state hospitals", "Ministry of Health"
Public-private partnership	"public-private partnership", "PPP", "hospital PPP", "private provision of public healthcare", "contracting private healthcare"
Funding efficiency	"funding efficiency", "cost-effectiveness", "cost reduction", "revenue generation", "resource utilization", "financial sustainability", "healthcare financing"
Quality of care	"quality of care", "patient satisfaction", "waiting time", "accessibility", "patient safety", "clinical outcomes", "continuity of care"
Regional context	"Oman", "Gulf Cooperation Council", "GCC", "Saudi Arabia", "health system reform", "healthcare financing Gulf"

The search terms will include public-private partnership, hospital, and quality of care, private sector engagement and funding efficiency and healthcare, hybrid healthcare model and government hospital, and healthcare financing and Gulf Cooperation Council. The search exported into reference-management software, duplicates will be filtered out, and the results will then be screened. The search record will include the database searched, date of search, search term searched, number of records retrieved and number of records left after the removal of duplicates. This report will support the PRISMA diagram and improve reproducibility.

2.8 Study Selection Process:

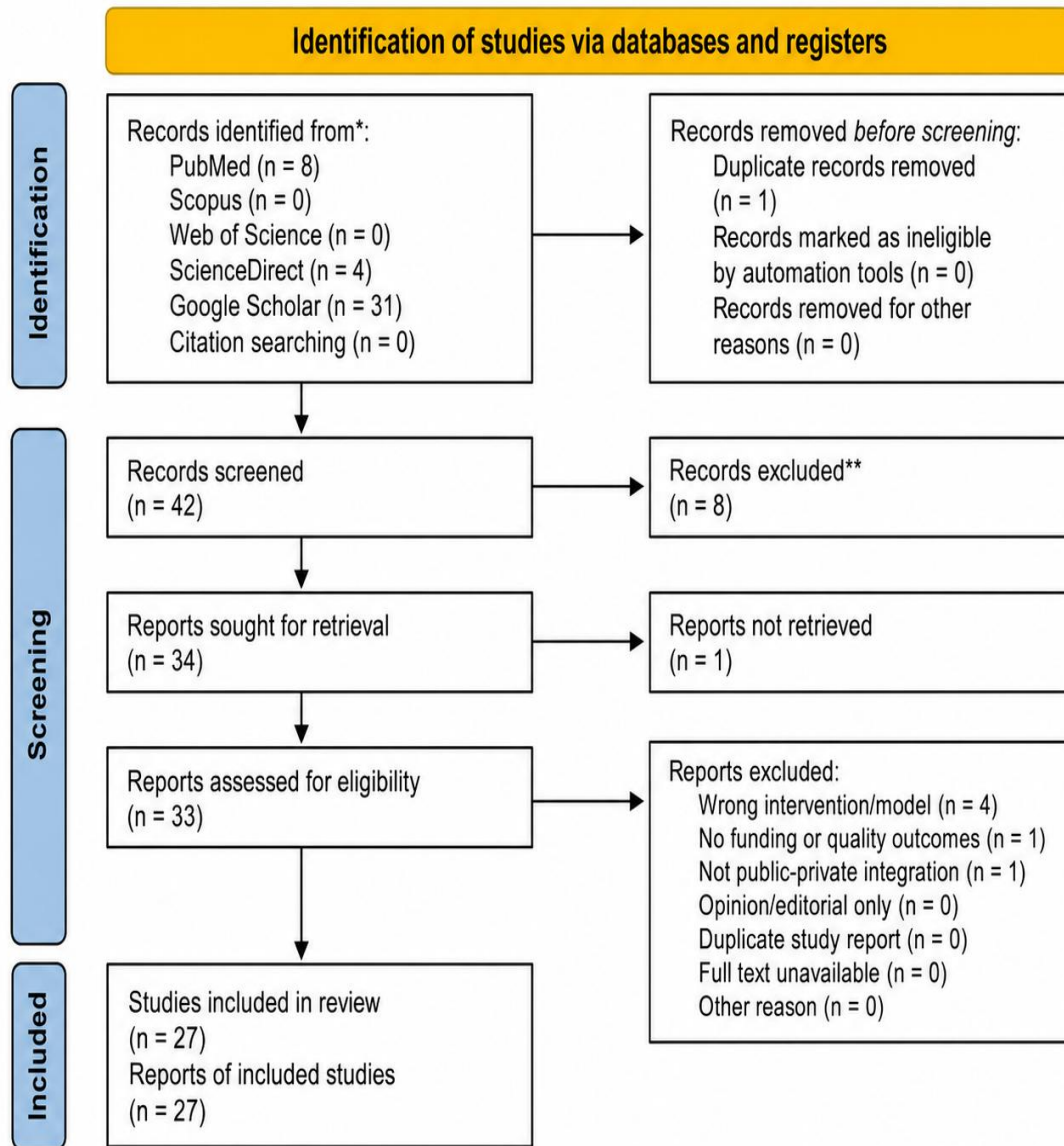
The study selection done in a systematic manner. Firstly, any records retrieved due to database search and citation tracking will be included into reference-management software. Duplicates eliminated. Second, the screening of titles carried out to filter out obviously irrelevant studies. Third, the abstracts reviewed to determine whether the studies are targeted at public-private integration, hospital services, funding efficiency, quality of care, access, patient outcomes or governance. Fourth, full-text articles will be evaluated by the inclusion and exclusion criteria. Fifth, the concluding studies will be organized in such a way that they will be quality appraised, extracted and synthesized.

The selection process will be recorded using a PRISMA flow diagram. Only after the actual search and screening are done, numbers will be added. This is essential for academic integrity because inserting estimated or invented screening numbers would create false data. Two reviewers will be used and the titles, abstracts and full texts will be filtered independently and any conflicting cases will be resolved through discussion. In the event that just a single reviewer does the screening, a third review of the screened out full-text articles will be done to minimize the possibility of eliminating pertinent studies.

2.9 PRISMA Flow Diagram:

The actual search and screening process will be carried out and then the following PRISMA diagram will be filled. The blank spaces should be filled with real numbers only after the database searches, duplication, title and abstract screening, full-text evaluation and final inclusion.

PRISMA DIAGRAM:



2.10 Quality Assessment and Critical Appraisal:

Appraisal tools that are recognized and applicable to every study design will be used to assess quality. They will be Joana Briggs Institute tools or CASP checklists, and will be dependent upon the nature of the evidence included. Clarity of question, search strategy, eligibility criteria, method of appraisal, and quality of synthesis and transparency of findings will be the appraisal criteria of systematic reviews. The observational studies will be assessed based on the following characteristics; sampling, measurement validity, outcome assessment, confounding, and relevance to the review question. The qualitative research will be assessed according to research design, recruitment, data collection, reflexivity, analytical rigour and credibility. Evaluations of economic and policies will be reviewed concerning comparator clarity, cost assumptions, outcome measures, policy context, and relevance to implementation.

Critical appraisal is necessary because public-private partnership literature may contain strong policy claims but variable methodological quality. Other studies are able to state positive results without the clear comparison groups and other ones are able to identify risks without the measurements of the implementation outcomes. Thus, the review will not merely tally the number of studies that support or do not support integration. It will rather assess the strength, relevancy and credibility of each

study. Reviews of the literature on the topic of public-private healthcare collaboration have shown that the outcomes depend mostly on the governance, accountability, funding, and regulatory structure (Basabih et al., 2022; Dove et al., 2025). Likewise, the integration evidence shows both positive and negative impacts on efficiency and quality, thus validating the necessity to evaluate it with care before making any conclusions (Machta et al., 2019).

2.11 Data Extraction:

The data-extraction form will be designed to be standardized and then full extraction will commence. The form will ensure that similar kind of information is collected in all studies that will be included. The data that will be extracted will include author and year, country, study design, healthcare setting, population or sample, type of integration, comparator, funding-efficiency outcomes, quality-of-care outcomes, governance mechanisms, implementation barriers, key findings, and relevance to Oman.

5. Table 2.4: Data Extraction Framework:

Data Category	Specific Information Extracted	Purpose of Extraction	Oman Policy Relevance
Study details	Author, year, title, journal, country, region.	Identifies source, setting, and publication context.	Supports comparison with Gulf and international evidence.
Study design	Review, observational, qualitative, mixed-methods, economic, policy, case study.	Assesses methodological strength and evidence level.	Helps judge reliability for Omani decision-making.
Healthcare setting	Public hospital, PPP facility, private clinic, diagnostic service.	Clarifies where integration model was implemented.	Shows transferability to government hospitals in Oman.
Integration type	Clinic integration, PPP, co-location, outsourcing, vertical integration.	Defines the public-private service delivery model.	Identifies models suitable for pilot testing.
Comparator	Public system, baseline, non-integrated model, none.	Enables comparison of outcomes before and after integration.	Supports evidence-based assessment against current care.
Funding outcomes	Cost, revenue, utilization, referrals, sustainability, efficiency.	Measures financial impact of integration models.	Links findings to funding sustainability goals.
Quality outcomes	Waiting time, satisfaction, access, safety, continuity, outcomes.	Measures service quality and patient-care effects.	Aligns with national quality and safety priorities.

Governance factors	Contracts, regulation, reporting, accreditation, accountability, oversight.	Examines controls protecting public interest.	Supports safe Ministry-led implementation and monitoring.
Implementation barriers	Equity risks, staff issues, costs, complexity, resistance.	Identifies challenges affecting successful implementation.	Helps design safeguards before pilot implementation.
Oman relevance	Vision 2040, MOH governance, digital health, quality assurance.	Assesses transferability to Oman's health system.	Guides practical policy recommendations for Oman.

Source: (Basabih et al., 2022; Dove et al., 2025).

Both explanatory factors and outcomes will be targeted in data extraction. This applies because the potential of successful integrated healthcare models is not only based on the financing design, but also on the governance, digital systems, staff involvement, and contract clarity, leadership, patient referral pathways, and quality monitoring. In this way, extraction will draw out quantifiable results as well as lesson of implementation.

2.12 Outcome Measures:

The two main outcome areas, which will be reviewed, include funding efficiency and quality of care. The efficiency of funding will include the cost effectiveness, cost saving, revenue generation, resource use, operational efficiency, financial sustainability, burden reduction on the government hospitals and unnecessary external referrals. These results are highly relevant to Oman as the Ministry of Health is investing colossal amounts of money in the workforce, infrastructure, pharmaceutical systems, digital health, and advanced services. The fact that the evidence regarding the efficiency of hospitals in Oman also indicates that the need to improve the utilization of resources and technical performance in state hospitals (Al Subhi, 2022).

Patient satisfaction, waiting time, accessibility, patient safety, clinical outcomes, and continuity of care, responsiveness, and equity will be some of the quality of care measures. Such results are necessary since a model that increases the revenue at the expense of patient safety, access, or continuity would not be acceptable. The case of Oman shows that the perspectives of patients and healthcare workers should be included in the quality of healthcare and patient safety (Al-Jabri et al., 2021). The quality monitoring is also at the center of any suggested integrated model as the Quality Assurance Center is involved in accreditation, standards, clinical performance evaluation, risk management, and patient safety (Quality Assurance Center, 2024).

Secondary outcomes will include the quality of governance, patient-affordability, workforce implication, regulatory compliance, digital integration and implementation feasibility. Equity will be considered a crosscutting outcome since the public- private integration can result in two-tier access where paying patients are offered quicker services and the public patients are delayed. Therefore, the review will examine the evidence provided by included studies that protection measures such as controlled pricing, communal waiting-list protection, open referral procedures, subsidized access, and continuous monitoring are observed.

2.13 Data Synthesis Method:

A narrative synthesis will be utilized because the studies to be incorporated will probably differ in design, healthcare setting, type of intervention, comparator, and outcome measurement. It is unlikely that a meta-analysis is suitable since various indicators, time, financing schemes, and country situations are frequently employed to engage in public-private integration research. Story synthesis will help the review to make comparisons between patterns in the studies, identify patterns of consistent results, discuss discrepancies in models, and comprehend implementation circumstances.

The synthesis will be organized in four stages. The nature of studies will be summarized initially, including countries, healthcare setting and models of integration study designs. Second, the results on funding-efficiency will be synthesized and they include cost-efficiency, revenue generation, resource utilization, fewer referrals, operational efficiency and cost-effectiveness. Third, synthesis of quality-of-care findings will be made such as waiting time, patient satisfaction, access, safety, continuity, and clinical outcomes. Fourth, the results of governance and equity will be examined in order to identify the circumstances under which effective implementation can be achieved or not.

The synthesis will also differentiate positive, negative and mixed findings. The improvement of service capacity, the decrease of waiting time, the increased use of infrastructure and the responsiveness of patients may be the positive outcomes. The negative outcomes may be higher costs of patients, inequitable access, a lack of accountability, failure of the contract, administrative complexity, and conflict of interest. Mixed results will be viewed with caution since there is no universal view of the public-private models that do not depend on the circumstances of governance and implementation (Basabih et al., 2022; Dove et al., 2025; Machta et al., 2019).

2.14 Oman-Specific Policy Translation:

The last section of the synthesis will be to translate evidence into policy implications to Oman. This is necessary because the experience of other nations cannot be directly transferred to Oman without considering the organization of the health-system, the management of the Ministry of Health, its digital health potential, the national quality standards, its workforce planning, and its priorities in Vision 2040. The recent reforms in the health-system of Oman emphasize the significance of governance, monitoring, performance evaluation, and improvement of service-delivery (Lai et al., 2024). The importance of local planning and institutional capacity to aid the Omani health system is also evidenced by decentralization evidence (Allawati et al., 2026).

The analysis of policy-translation will be based on the potential of the integration of the private clinics in order to help Oman reduce waiting time, make the most of specialists, improve the utilization of hospital facilities, establish controlled revenues, reduce the number of unnecessary referrals, and increase the patient-centered care. The safeguards that have to be in place to make sure that inequity, increased costs to the patients, records fragmentation, staff conflict, and low accountability are prevented will also be found in the analysis. These safeguards will include regulated pricing, safeguarding the public service, transparent referral criteria, digitalization, patient-safety reporting, contract management, quality accreditation, and performance dashboards.

The evaluation will also suggest a planned pilot roadmap instead of suggesting that the country should adopt it instantly. The pilot approach is more suitable since the evidence on the integration of the population and the companies is ambivalent and contingent. An efficiently run pilot would empower Oman to drive efficiency, quality, access, equity, and patient-safety results and expand her reach. This aligns with the global experience of the existence of effective governance and constant review of the models of public-private collaboration to achieve positive results (Basabih et al., 2022; Dove et al., 2025; Dogan Erdem et al., 2024).

2.15 Proposed Pilot Pathway for Oman:

The pilot pathway proposal will start by identifying one to two government hospitals with high outpatient demand, appropriate infrastructure, high digital preparedness, and quality-management systems. The pilot should focus on services that are less risky such as after-hours specialist clinics, follow-up on chronic diseases, diagnostic, rehabilitation clinic, or elective outpatient consultations. These services are suitable since they are quantifiable, can alleviate the pressure on waiting-time, and are clinically less risky compared to emergency or intensive care services.

It should have a governance committee in place prior to implementation. The team must comprise of the Ministry of Health, hospital leadership, Quality Assurance Center, finance, legal affairs, digital health, and the representatives of the private sector, patient-experience units, and the authorities of the governorate health. The committee would determine the range of services, costs, eligibility, and referral pathways, data sharing guidelines, quality, workforce strategies, patient safety, and reporting. The need to govern is supported by the ongoing identification of weak contracts and ineffective regulation as a threat to the relationships in the public and private healthcare collaboration (Basabih et al., 2022; Dove et al., 2025). The pilot should incorporate a clear financial model. The contracts should specify whether the private clinics would pay rental, share the profits, labor on service-based payments, or outcome-based basis. Financial regulations should make certain that any revenue collected is used to improve public hospitals and not to diminish access by the public patients. Patient-affordability protections to avoid

two-tier care should also be incorporated into the model. It should be obligatory to integrate digitally with approved electronic health records, referral systems, billing controls, dashboards, and incident-reporting systems. The development of digital health and health-system performance assessment in Oman has a solid basis to this need (Lai et al., 2024; Mohamed et al., 2025).

Pilot assessment should be at baseline, six months and twelve months. The indicators are to be funding-efficiency indicators with a list of the revenue generated, cost per patient episode, clinic space utilization, diagnostic equipment usage, reduction of waiting-list, and reduction of unnecessary external referral. The quality indicators must consist of waiting time, patient satisfaction, complaint rates, safety incidents, clinical outcomes where applicable, continuity of care and equity of access. The Quality Assurance Center will be on the frontline to monitor the standards, accreditation, clinical performance, patient safety, and risk management (Quality Assurance Center, 2024). This would be a staged approach that would enable Oman to take evidence-based decisions prior to scaling up the model.

2.16 Ethical Considerations:

Since it is a systematic review, the research will rely on published literature and policy evidence and not gathering identifiable patient data. Thus, neither patient consent nor clinical ethical approval are necessary. Nonetheless, the subject matter has significant ethical considerations in that integration in government hospitals by the private sector can influence equity, affordability, patient choice, access, and trust in the government. The review will thus address the question of whether included studies address ethical risks that may include two-tier care, inequitable waiting times, more out-of-pocket payments, preferential access, conflict of interest, and diversion of public resources.

In the case of Oman, the ethical consideration should be to make sure that any integrated model should enhance the existing public healthcare system and not undermine it. The quality, availability and timeliness of care to the public patients should not be compromised by the private services. The incomes will be re-invested in the improvement of the services, quality assurance, and patient care. It should be accountable, transparent and patient safety. This is in line with the fact that Quality Assurance Center is a national reference center in healthcare quality and patient safety (Quality Assurance Center, 2024).

2.17 Reliability, validity and trustworthiness:

The search strategy is well written, inclusion and exclusion criteria are uniform, extraction framework is standardized, and screening decision reporting is clear, which will contribute to the enhancement of reliability. Validity will be supported by making sure that the research question, PICO framework, outcomes, appraisal method and synthesis approach are aligned to the actual policy problem. The fact that the models of public and private healthcare are incredibly influenced by local governance, funding, regulation, workforce, and patient expectations will not overgeneralize the review.

Credibility will be enhanced by reporting balanced results. The benefit evidence that includes increased access, decreased waiting, better resource utilization, and increased operational flexibility will be evaluated in comparison to the risks evidence, which includes inequity, increased patient costs, poor accountability, complexity of administration, and fragmented care. This moderate understanding is necessary as the partnerships between public and private may yield positive and negative results based on how they are designed and implemented (Basabih et al., 2022; Dove et al., 2025; Kumar, 2022; Machta et al., 2019).

2.18 Methodological Limitations:

There are a number of restrictions to be anticipated. To begin with, it may not be possible to access a large number of studies that specifically address the issue of physical private clinics in the government hospitals and, therefore, the models of the public-private integration will have to be applied. Second, the healthcare systems in other countries are different and this may limit transferability to Oman. Third, research might have different definitions of funding efficiency, quality of care, integration, and public-private partnership. Fourth, meta-analysis can be inconclusive due to heterogeneity of outcomes, study designs and situations. Fifth, the evidence in the Gulf region might be smaller compared to the evidence in the international level.

In spite of these shortcomings, the systematic review will offer an excellent evidence base through the synthesis of the current international, Gulf-region, and Oman-related studies. The review will particularly detect strong evidence, moderate evidence, mixed evidence and areas, which require local pilot testing. The practice is essential to come up with valid recommendations to the decision-makers and avoid making unfounded claims.

2.19 Summary:

The approach offers a stringent guide to conducting a systematic evidence review on the topic of the integration of private clinics in government hospitals and other similar models of public-private healthcare. It will conduct the review based on the principles of PRISMA 2020 reporting, major academic databases will be used, clear eligibility criteria will be applied, systematic screening will be conducted, data will be evaluated with the assistance of recognized tools, standardized framework will be applied to extract data, and findings synthesis will be conducted with the help of narrative analysis. To ensure the financial sustainability is not neglected and the patient satisfaction, waiting time, accessibility, safety, continuity, and clinical outcomes are considered, the funding efficiency and quality of care will be measured using the methodology.

This review is highly applicable in the case of Oman because the health system is in the process of expansion, digitalization, institutionalization of quality assurance and financial sustainability is a strategic priority of Oman Vision 2040. The methodology also helps in development of realistic pilot pathway based on the evidence, governance, digital integration, quality monitoring, and stage evaluation. The review will be academically sound and give decision-makers sound evidence to consider whether or not the integration of private clinics can enhance the Omani public health system by not entering fabricated PRISMA numbers and only using real screening outcomes once the actual search process is carried out.

3.0 Chapter Three: Literature Review

3.1 Introduction:

This chapter analyzes critically the evidence of private clinics being integrated into government hospitals and other forms of public-private health care. The review is organized around five broad themes of this study: public-private partnership models, financial efficiency, quality of care, challenges and risks, and the Gulf and Oman context. The aim is to find out if integration of private clinics can enhance funding efficiency and quality of care outcomes relative to the normal public health care system and what policy implications can be drawn for integration into Oman. It's significant since public health care systems are in greater financial and operational strain. International literature suggests that health systems must address rising health costs, rising prevalence of chronic disease, technological advances and expectations of patients and maintain access and sustainability. (Mohamed et al., 2025; Sahoo et al., 2023; Shimul et al., 2023) Hospitals are particularly impacted, as they are high cost institutions, which offer emergency services, specialist services, diagnostics, surgery, rehabilitation, medicines, and referral services. So, the reduction of the health service costs should be considered in the hospital reform, as well as its efficiency and quality (Barraza-Lloréns et al., 2025; Lucifora, 2023).

The topic is very related to Oman in terms of Oman Vision 2040, Oman's national health agenda emphasizes sustainability, quality, governance, decentralization and improved quality of life. Oman has begun to apply a health-system performance assessment framework based on the WHO framework to support health-system reform priorities, plan, govern and deliver services (Lai et al., 2024). However, recent research suggests that Oman is also building up its health technology assessment capacity to aid in evidence-based resource allocation and healthcare value decision-making (Alrashdi et al., 2024). These changes indicate that private clinic integration is a policy that is relevant, so long as it is supported by good governance, measurable outcomes, quality assurance and equity protections.

3.2 Public-Private Partnership Models in Healthcare:

3.2.1 Definition and Scope of PPP Models:

A public-private partnership in health care is a partnership between the government and private-sector organizations that shares the funding, construction, operation, or delivery of health services to the public, but keeps the public-interest goals. These models can be private, but can also consist of service contracts, infrastructure partnerships, outsourcing of services, co-locating services, private management support, shared diagnostic platforms and private provision of publicly regulated services. The most appropriate PPP in this study is the inclusion of private (or semi-private) clinics in the government clinic buildings, where the private clinical services will be operated in the government hospital premises and be subject to the regulation and control of the Ministry, clinical governance and clinical quality monitoring. This model is significant as it can help extend access to specialists, enhance utilization of existing hospital facilities, mitigate patient wait times, and generate revenue through the healthcare system in a regulated and stable manner, while not replacing public health services (Basabih et al., 2022; Dove et al., 2025; Machta et al., 2019).

3.2.2 Infrastructure and Hospital Development PPP Model:

The most common PPP model in the healthcare industry is the “infrastructure” model, which involves the private sector financing, building, running or maintaining health care facilities. This model is commonly used when governments are faced with a need to add beds to their hospitals, but do not have sufficient capital or expertise to achieve this. The literature on hospital PPPs shows that hospital PPPs can deliver improved quality of infrastructure, service capacity and operational performance, which is significantly influenced by the design of the PPP, the risk allocation and the role of the government in monitoring the PPP (Basabih et al., 2022; Dogan Erdem et al., 2024). The model can be used in Oman as facilities in hospitals, health centers, laboratories and special services are growing. However, infrastructure PPPs are not necessarily directly linked to the quality of care, unless they include quality indicators that can be measured such as waiting times, patient satisfaction, safety, and clinical performance (Barraza-Lloréns et al., 2025; Quality Assurance Center, 2024).

3.2.3 Service Delivery and Outsourcing Model:

The other model that is important is the outsourcing/contracted service delivery model. In these models, certain services such as dialysis, rehabilitation, radiology, specialist consultation, diagnostics, lab testing and/or pharmacology, services are delivered by private providers and supervised by the public sector. Based on international experience, outsourcing can help to enhance the availability and operational flexibility of services, but it can also present cost control, accountability, quality management, and continuity of care challenges (Basabih et al., 2022; Kumar, 2022). The Jordanian COVID-19 laboratory partnership is pertinent in this context because, well-defined coordination and reporting mechanisms enabled the use of private laboratory capacity on public health response (Abu-Dayyeh et al., 2023). This model could be applied when there is a lack of specialists and/or the waiting time for services is long, but should be monitored with performance measures and under the supervision of the Ministry of Health (Lai et al., 2024; Quality Assurance Center, 2024).

3.2.4 Co-Location and Private Clinic Integration Model:

The co-location model is the most pertinent for this research. It is a way of identifying private or semi-private clinics in the premises of government hospitals. These clinics may be outside of regular working hours, may provide specialist outpatient consultations, may provide support for chronic disease follow-up, and may provide selected diagnostic and rehabilitation services. This model has benefits, and enables the use of existing hospital buildings, equipment and digital systems in an efficient manner, thereby increasing the choice of patients and access to specialists. However, co-location should not be allowed to be unchecked privatization! There is some evidence that it can influence efficiency, quality, and patient-centered outcomes, and the impact of vertical integration is mixed, depending on governance, incentives, information systems and accountability (Machta et al., 2019). This model should therefore be implemented in Oman exclusively via controlled contracts, price controls, public-patient protection measures, shared records and quality monitoring.

3.2.5 Strategic Purchasing and Financing Model:

Strategic purchasing is also a PPP model that is used where the government will buy certain services from private service providers to help eliminate waiting lists, improve access to services or prevent services being delivered overseas. This model is applicable in the Gulf countries where sustainability is becoming more prominent, value-based purchasing, and private sector involvement in health financing reform are gaining traction (Nair et al., 2024; AlRuthia et al., 2025; Hamad et al., 2025). Oman's strategic purchasing could be a way to incentivize private clinics to join government hospitals, if they are linked to outcomes, quality indicators, patient satisfaction and cost-effectiveness. This would align with the general trend of Oman transitioning to the performance-based assessment, health technology assessment, and evidence-informed planning (Lai et al., 2024; Alrashdi et al., 2024).

3.2.6 Governance-Centered PPP Model:

In all of the PPP models, governance is the most critical success factor. Dove et al. (2025) highlight the need for accountability, transparency, regulation, engagement, and alignment with public health objectives in the implementation of PPPs. If there is no governance, it is possible for PPPs to bring about inequity, out of pocket payments, conflict of interest as well as access inequality (Kumar, 2022; Alonazi & Alkhawtani, 2025). The Quality Assurance Center offers a solid institutional basis for the accreditation, standards, clinical performance assessments, patient safety, and risk management of Oman (Quality Assurance

Center, 2024). It is therefore crucial to think of private clinic integration in terms of a model that is driven by the Ministry, quality monitored, digitized and equity enhancing rather than just market expansion.

6. Table 3.1: Public–Private Partnership Models and Relevance to Private Clinic Integration:

PPP Model	Core Description	Evidence Link to Systematic review:	Relevance to Oman
Definition and scope	Formal public–private collaboration for regulated healthcare service delivery.	PPPs vary by design, governance, financing, and outcomes (Basabih et al., 2022).	Supports regulated integration without replacing public healthcare services.
Infrastructure PPP model	Private sector supports hospital financing, construction, and maintenance.	Infrastructure PPPs may improve capacity but need oversight (Dogan Erdem et al., 2024).	Relevant to Oman's hospital and specialist-service expansion.
Service delivery model	Private providers deliver selected public services under supervision.	Outsourcing may improve availability but risks accountability gaps (Kumar, 2022).	Useful for diagnostics, rehabilitation, dialysis, and specialist shortages.
Co-location model	Private clinics operate within government hospital premises.	Integration outcomes depend on governance, incentives, and systems (Machta et al., 2019).	Most relevant model for private clinics inside hospitals.
Strategic purchasing model	Government purchases services from private providers using contracts.	Gulf reforms increasingly emphasize sustainability and value purchasing (Nair et al., 2024).	Can reduce waiting lists and overseas treatment referrals.
Governance-centred model	Governance controls quality, equity, contracts, and accountability.	Strong governance determines PPP success and public value (Dove et al., 2025).	Essential for Ministry-led, safe, equitable implementation in Oman.

Source: (Dove et al., 2025); (Nair et al., 2024); (Machta et al., 2019).

3.3 International Experiences with Public–Private Healthcare Integration:

It is clear that in other countries, a well-managed private-public partnership can be used to achieve public health results, as illustrated by good practice examples. During the COVID-19 period, Jordan has set up a public–private partnership between Biolab and public laboratories. Under public coordination, private lab capacity plays a role in the national testing and the emergency response process as shown by Abu-Dayyeh et al. (2023). The example does not have a direct link to the private sector in the government hospital, but it shows that when roles, reporting systems and accountability are clear then private sector resources can complement and strengthen public health capacity.

The experience gained from India is a useful lesson, too. Rakesh and Shannawaz (2024) studied private sector involvement in TB care in Kerala and highlighted the importance of universal access, linkage and quality assurance of people seeking care in the private sector. Private health-service delivery can also be a part of supporting tuberculosis care, but only if there is ongoing engagement and connection to public health reporting and standards (Suseela and Shannawaz 2023). The findings are relevant because the rules for referral, documentation, continuity and outcome monitoring will have to be the same for private clinics in government hospitals.

The recent experience of Taiwan is also indicative of the significance of innovation and public–private coordination. While coordination and governance are essential for driving innovation in the healthcare system, innovation can also be facilitated through collaboration, according to the authors of Chen et al. (2025) who talk about PPPs in an acute-care ecosystem. This evidence can be applicable in Oman as digital transformation is already one of the major concerns in the country. However, there are dangers in international evidence, as well. Dogan Erdem et al. (2024) list the most important risk factors of PPP city hospital projects in Turkey as contractual, financial and management risks. Hence, based on the global experience, private sector participation can be beneficial, but might be limited by the quality of contracts and risk allocation.

3.4 Financial Efficiency: Cost Reduction, Revenue Generation, and Resource Utilization:

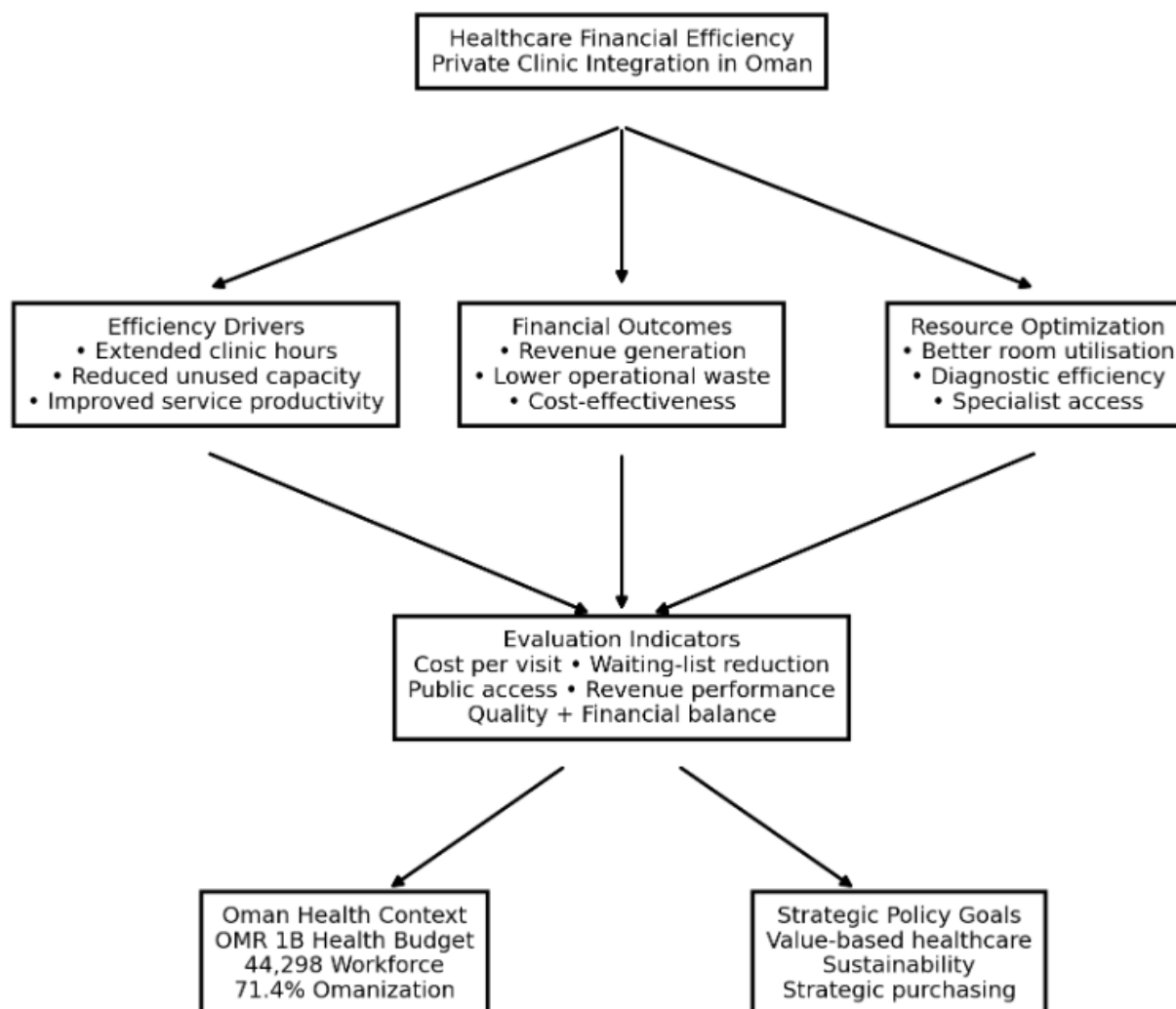
The study has two primary areas of financial efficiency. Healthcare financial efficiency is the ability to use resources to get the most health value, reduce waste, improve productivity and support sustainability. Does not mean a simple reduction in costs, regardless of impact on patients. However, data from hospital efficiency shows that financial indicators should be taken into account along with quality indicators as poor-quality care can lead to increased healthcare costs because of complications, attendances, dissatisfaction and inefficient use of services (Barraza-Lloréns et al., 2025). There is evidence from Oman that efficiency is important. Al Subhi (2022) studied the technical efficiency, productivity and inefficiency factors of local hospitals in Oman using data envelopment analysis (DEA) method. This study is relevant directly because it found that the service volume is not the only factor to be used in the assessment of the effectiveness of the hospitals in Oman. The integration with a private clinic can have a positive effect on efficiency by increasing the working day in the hospital premises after the formal working day, more efficient use of hospital diagnostic resources (which may be offered by the private clinic), and by increasing the hours of specialist clinic sessions and through the reduction of unused capacity. However, this benefit should be measured with metrics such as cost per visit, room utilization, revenue generated, reduction in waiting list and public patient access.

The data available from the Ministry of Health, Oman, demonstrate the need for financial efficiency as a policy issue. The allocation of public expenditure on health increased to almost OMR 1 billion in the Ministry of Health budget 2026, which was conducive to the enhancement of public investments in health services. Public investment was strong in the health sector with a budget of OMR 1 billion in 2026. The number of health workforce workers rose from 37,732 in 2021 to 44,298 in 2025, and Omanisation is 71.4% in 2025. There is also significant spending on medicines and sera: The unified tender for medicines and sera increased from OMR 149 million in 2023 to OMR 202 million in 2025-2026. At the same time, the combined national and GCC tenders resulted in OMR 27.4 million savings compared to OMR 20.4 million in 2023. These statistics illustrate that Oman is already piloting the procurement reform to boost efficiency, but sustainability will need to go beyond that and involve service delivery reform as well.

This is supported by literature from the Gulf region. The Saudi Arabia's healthcare financing reforms are linked to sustainability, strategic purchasing and engaging the private sector, according to Nair et al. (2024). AlRuthia et al. (2025) suggest the need for stronger health economics and outcomes research (HEOR) for policy decision-making in the GCC in relation to technologies, services and financing. Also highlighted, as a route to sustainable access to specialty pharmaceuticals is value-based healthcare in the GCC by Hamad et al. (2025). The research shows that the government should consider the integration of private clinics in

Oman according to value-based measures, not just revenue. A well-designed financial plan should go beyond providing a new paid-service pathway; it should be good for the patient and the public system.

Diagram 1:



Sources: (Hamad et al., 2025).

3.5 Quality of Care: Patient Satisfaction, Waiting Time, Safety, and Continuity:

3.5.1 Quality of Care as a Core Evaluation Domain:

The quality of care is an important area of assessment in the context of private clinic integration in government hospitals, as financial efficiency alone cannot justify a healthcare reform that would lead to decreased patient safety, access, continuity or clinical outcomes. In this study quality is defined as accessibility, patient satisfaction, clinical effectiveness, safety, continuity of care, responsiveness and equitable service delivery. Existing evidence on hospital efficiency suggests that financial outcomes should be assessed alongside quality measures since the low quality of care may result in higher complication rates, rehospitalization rates, patient satisfaction, and healthcare system costs in the long run (Barraza-Lloréns et al., 2025; Lucifora, 2023). Hence, the integration of private clinics in the Oman should be evaluated based on service performance and outcomes and not on revenue generation as such.

3.5.2 Patient Safety and National Quality Governance in Oman:

Oman has a framework for quality monitoring through the Quality Assurance Center (Oman Quality Assurance Center, 2024) as a national reference body for healthcare quality and patient safety, which provides a basis for accreditation, standards development, clinical performance monitoring, patient safety and risk management. This is very applicable and relevant since the private or semi-private clinic is provided in the public clinic, which is subject to the same standards as public services. Al-Jabri et al. (2021) also found that the quality of care and patient safety in Oman should be viewed from the patient and healthcare professional perspectives, and that staff feedback, patient experience, reporting of patient safety incidents and clinical governance should be incorporated in any integrated model. This is consistent with other findings regarding the importance of clear accountability, shared systems, and quality monitoring to avoid fragmented or unsafe care in integrated healthcare models (Machta et al., 2019; Dove et al., 2025).

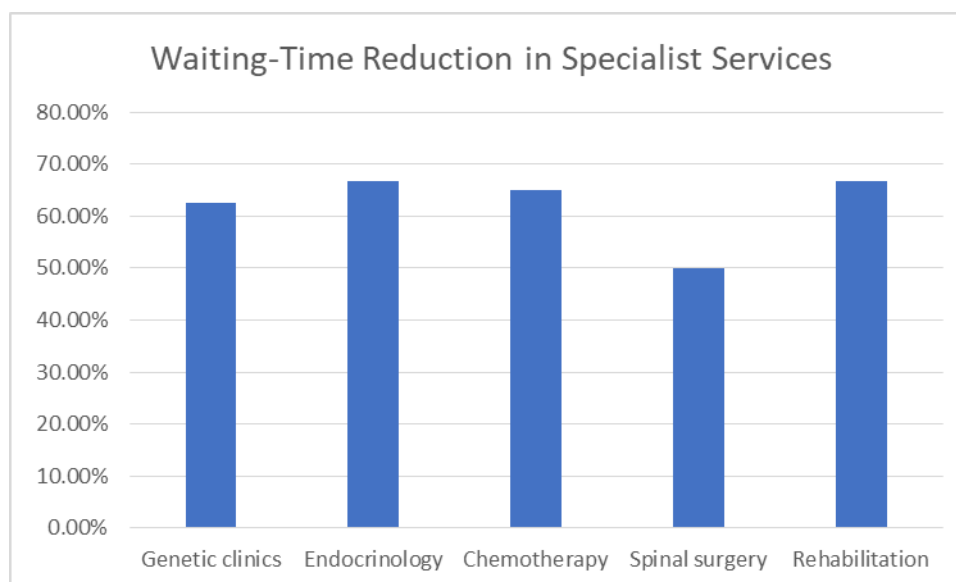
3.5.3 Waiting Time and Access to Care:

One of the most important quality indicators of this study is waiting time as it has significant impact on patient experience, access and timely treatment. The data of the Ministry of Health, Oman has revealed significant improvement in the waiting times for various services in its facilities such as: Genetic clinic: reduced from 8 weeks to 3 weeks; Endocrinology: reduced from 6 weeks to 2 weeks; Chemotherapy: reduced from 4 weeks to 10 days; Spinal surgery: reduced from 12 weeks to 6 weeks; Rehabilitation: reduced from 6 weeks to 2 weeks. In 2025, also waiting times were reduced by up to 40% in emergency departments compared to 2024 and emergency congestion in governorates reduced by 30–40%. These statistics show that implementing service redesign can enhance access. Additional reductions are possible through private clinic integration, which can include more specialists, use of off-hours at hospitals, and improved referral flow (Al Subhi, 2022; Lai et al., 2024).

3.5.4 Patient Satisfaction, Diagnostics, and Continuity of Care:

Patient satisfaction is critical as patient experience, communication, convenience; affordability and perceived fairness are increasingly the basis for evaluating healthcare quality. Patient views are crucial in evaluating the quality of health services, which is supported by a systematic review from the GCC countries (Alsubahi et al., 2024). Al-Mashaikhi et al. (2025) also indicate that patient satisfaction plays a pivotal role in the realm of outpatient mental health services in Oman. Diagnostic efficiency was also identified as another quality factor, which was found to have a positive impact on operational efficiency and clinical decision making in Oman, in line with Al Qassabi et al. (2025). The continuity of care also needs to be safeguarded. Pharmacy waiting time has been cut from 40 minutes to 15 minutes and 65% of institutions have been connected to PACS/Shifa systems, and 57 out of over 80 services have been automated, supporting this. In this regard, Oman's digital journey has reduced the waiting time in the pharmacy from 40 minutes to 15 minutes, and brought 65% of the institutions into PACS/Shifa system and automated 57 from over 80 services. Finally, private clinic integration should be based on shared records, tracking referrals, reporting safety, and patient-centered dashboards – all for safe, continuous and patient-centered care (Mohamed et al., 2025; Lai et al., 2024).

7. Graph 3: Waiting-Time Reduction in Specialist Services:



For chemotherapy, 10 days = approximately 1.4 weeks.

8. Table 3.2: Technical Quality-of-Care Domains Linked to Private Clinic Integration:

Quality Domain	Technical Indicator	Evidence Link to Essay	Integration Relevance for Oman
Quality evaluation	Timeliness, safety, effectiveness, continuity, patient-centeredness, equitable access.	Efficiency must align with quality outcomes (Barraza-Lloréns et al., 2025).	Prevents revenue-focused integration from weakening care standards.
Patient safety governance	Accreditation, standards, clinical performance, risk management, safety reporting.	QAC leads national quality and patient safety governance (Quality Assurance Center, 2024).	Ensures private clinics follow Ministry quality requirements.
Patient-professional perspectives	Patient experience, staff feedback, safety culture, clinical accountability.	Omani quality assessment requires patient and professional perspectives (Al-Jabri et al., 2021).	Supports balanced monitoring of integrated clinic performance.

Waiting-time reduction	Genetic, endocrine, chemotherapy, spinal, rehabilitation access times.	Waiting times improved substantially in 2025 Ministry data.	Integration can expand sessions and reduce outpatient delays.
Emergency access	Emergency waits reduced up to 40% from 2024.	Service redesign improved urgent-care flow nationally.	Shows redesign capacity for access-focused integration.
Patient satisfaction	Communication, convenience, affordability, responsiveness, privacy, perceived fairness.	GCC quality reviews emphasize patient-centred outcomes (Alsubahi et al., 2024).	Measures whether integrated clinics improve patient experience.
Diagnostic efficiency	Radiology turnaround, reporting accuracy, clinical decision support.	Radiology efficiency supports timely clinical decisions (Al Qassabi et al., 2025).	Relevant if integration includes diagnostic or imaging services.
Continuity of care	Shared records, referral tracking, follow-up, medication reconciliation.	Integration requires shared systems and accountability (Machta et al., 2019).	Prevents fragmented records between public and private services.
Digital integration	Shifa, PACS, dashboards, virtual care, electronic reporting.	Digital health supports monitoring and continuity (Mohamed et al., 2025).	Enables safe, traceable, data-driven hybrid care delivery.
Operational efficiency	Pharmacy waits reduced from 40 to 15 minutes.	Digital redesign improved service speed and patient access.	Shows technology can improve integrated care workflows.

Source: (Alsubahi et al., 2024); (Mohamed et al., 2025); (Al Qassabi et al., 2025).

3.6 Clinical Outcomes and Safety Indicators:

Access improvement is not enough to measure clinical outcomes, which must also be part of the evaluation of integration of private clinics. There must be effective, safe and ongoing care for patients. Clinical outcomes may include disease control, complications, readmission rates, treatment adherence, diagnostic turnaround time, adverse event reporting and mortality (if applicable). A hospital PPP study by Basabih et al. (2022) revealed that the diagnosis, treatment, waiting time, length of stay, referral rate, mortality rate and patient satisfaction were improved. However, the review found less compelling evidence to support financial indicators, and clinical quality and financial performance should be measured separately.

Oman's recent service accomplishments indicate ability for sophisticated clinical treatment. According to the information provided by the Ministry, the first heart transplant in Oman, 38 kidney transplants, 16 liver transplants, corneal transplantation for 113 more patients and reduction of radiotherapy sessions by 35% were achieved. The successes of the country are a result of the country's work to localise complex services and reduce the need for foreign care. Al-Aamri et al. (2025) also add more evidence for outbound medical treatment at public hospitals, derived from the analysis of 2,364 patients who were referred abroad in 2022-2023 and of whom 1,428 were treated abroad (excluding 936 who were treated in local hospitals). It reinforces the need to build up the capacity of specialists in the local area and to test and review the feasibility of integrated models, which may help to minimize avoidable external referral.

Safety of the patient is also a top priority. The accreditation, standards development, clinical performance assessment, patient safety and risk management functions within the Quality Assurance Center offer a governance framework to ensure monitoring of integrated services (Quality Assurance Center, 2024). Where the private sector is operating within the public hospitals, the safety standards are to be the same as in the public sector. These include incident reporting, infection prevention, medication safety, credentialing, the complaint process and audit of outcomes. Failure to take these precautions may create an unfair playing field in the same hospital if private clinic integration is not conducted.

3.7 Challenges and Risks of Private Clinic Integration:

There are some potential benefits but also significant risks. The first risk is that of equity. The goal of public hospitals is not to treat people for the money, but to treat people when they need it. The model could lead to a two-tier care system, if private clinics in government hospitals are open for paying patients and public patients have to wait for a longer period. Kumar (2022) contends that the aim of PPP should be to avoid the hikes in financial burden, but should ensure regulation of out-of-pocket expenditure and enhance government service networks. Alonazi and Alkhawtani (2025) also highlight the need for financial structures based on equity to ensure sustainable healthcare systems in Arab countries. In line with this, measures of affordability, strict eligibility requirements and protection of public waiting list must be implemented for Omani pilots.

The second one is governance failure. Both Basabih et al. (2022) and Dove et al. (2025) identify governance as a key factor that affects the performance of PPPs. Governance problems may be related to unclear contracts, poor monitoring, lack of accountability, unclear risk sharing and transparency problems. Dogan Erdem et al. (2024) also pinpoint some of the same critical PPP risks in hospital projects, such as contracting and long-term management risks. Important features of governance for Oman are leadership, legal accountability, financial supervision, digital reporting, quality assurance and patient-safety accountability of the Ministry of Health.

Conflict of interest is the third risk. Private and public hospitals may have overlapping clinical services, which can cause issues of dual practice, staff allocation, referral incentives and differential access. If there were no rules, the capacity of public service could be limited in public service, in the capacity of public doctors providing private service, and in the capacity of public facilities providing private service. This risk is particularly important in Oman where sustainability and Omanisation of workforce is a priority. The nurse practitioner role in Oman is highlighted by Ismaili et al. (2023), emphasizing the need for policy planning in implementing the role. Al Jabri et al. (2022) also point out the competencies in evidence-based practice in healthcare professionals in Oman. The studies showed that there is a need for clear policies for the workforce, credentials, duty separation and workload monitoring for these integrated models to be successful.

Administrative complexity is the fourth risk. Contracts, billing systems, referral pathways, patient consent, shared medical records, complaint systems, financial audits, quality dashboards and performance reviews are all required for a hybrid approach. These systems may be ineffective, and the model might add to the bureaucracy if these systems are weak. That is the reason why the Oman movement towards HTS is relevant. Al Rashdi et al. (2024) created a roadmap for implementing HTA in Oman using gap analysis and specifically HTA is relevant because it helps to inform evidence-informed resource allocation and value assessment. Thus, private clinic integration should not be considered a routine health-system intervention and should be formally evaluated in order to proceed to scale-up.

9. Table 3.3: Challenges and Risks of Private Clinic Integration in Government Hospitals:

Risk Domain	Challenge	Evidence	Required Oman Safeguard
Equity risk	Paying patients may receive faster access.	PPPs may increase out-of-pocket costs (Kumar, 2022).	Regulated pricing and protected public waiting lists.
Access inequality	Two-tier care may develop inside hospitals.	Equity financing is vital regionally (Alonazi & Alkhawtani, 2025).	Transparent eligibility and access monitoring rules.
Governance failure	Weak contracts reduce accountability and transparency.	Governance determines PPP success (Dove et al., 2025).	Ministry-led contracts, audits, and dashboards.
Contract risk	Poor risk allocation increases financial exposure.	PPP hospitals face contract risks (Dogan Erdem et al., 2024).	Legal review and risk-sharing clauses.
Financial uncertainty	Efficiency gains may not be guaranteed.	PPP financial evidence remains mixed (Basabih et al., 2022).	Cost-effectiveness assessment before scale-up.
Cost escalation	Paid services may increase affordability pressure.	MOH 2026 budget reached about OMR 1 billion.	Price caps and transparent billing systems.
Workforce conflict	Dual practice may reduce public availability.	MOH workforce reached 44,298 employees in 2025.	Duty separation and workload monitoring.
Workforce sustainability	Specialist shortages may weaken public services.	Omanisation reached 71.4% in 2025.	Workforce planning aligned with Omanisation.
Administrative complexity	Hybrid care needs billing, referrals, audits.	57 of over 80 services automated.	Unified digital workflows and referral tracking.
Digital fragmentation	Separate records may weaken care continuity.	65% institutions integrated into PACS/Shifa.	Mandatory shared records and interoperability.
Patient safety risk	Different standards may create inconsistent care.	QAC leads national safety governance (Quality Assurance Center, 2024).	Unified accreditation and incident reporting.

Demand pressure	Chronic disease burden may overload clinics.	93.1% adults have one NCD risk factor.	Prioritize high-demand chronic disease services.
Specialist demand	Diabetes and hypertension increase follow-up needs.	Hypertension 28.8%; diabetes 13.4%.	Expand endocrinology and cardiology pathways.
Obesity burden	Obesity increases long-term specialist demand.	Overweight or obesity reached 64.7%.	Integrate prevention and chronic-care clinics.
Evaluation weakness	Unmeasured scale-up may create policy failure.	HTA supports value-based decisions (Al Rashdi et al., 2024).	Baseline, six-month, twelve-month evaluation.

Source: (Al Rashdi et al., 2024); (Quality Assurance Center, 2024).

3.8 Gulf and Oman Context:

The Gulf context is very relevant as countries in the Gulf are in the process of healthcare financing reform, private sector involvement, digital health and access to advanced therapies. Nair et al. (2024) demonstrate the connection between the Saudi Arabia's healthcare financing reform and sustainability and health system transformation. AlRuthia et al. (2025) suggest that the health economics capacity in the GCC countries needs to be enhanced to enable decision makers in the region, particularly in the fields of health technology assessment, economic evaluation and policy-making. In the context of GCC, Hamad et al. (2025) also talk about value-based health care as a roadmap towards sustainable access to specialty pharmaceuticals. The results of these studies suggest that the Gulf countries are moving their public expenditure from "unlimited" to "value", "efficiency" and "structured" purchasing.

However, this regional evidence has to be used with caution for Oman. The healthcare system in Oman is unique; the Ministry of Health (MOH) is a central player in the system and plays a dual role as a planner, provider and regulator. The assessment of Oman's health-system performance revealed that there was a need for more robust planning, governance and monitoring (Lai et al., 2024). Decentralization is also an important factor in the health development of Oman. After 30 years of health-system decentralization in Oman, Allawati et al. (2026) assess its relevance and importance of the capacity to have a governance and local planning system. The integration of private clinics should be considered not only in central hospitals but also as a means to enhance access to the Governorate level for specialist services, which are limited.

New models of services are needed in Oman due to the burden of the disease. The national data shows that 64.7% of adults were overweight or obese, 28.8% had hypertension, 13.4% had diabetes, and 27.9% were not getting the recommended amount of physical activity. The figures indicate that outpatient clinics, diagnostics, pharmacy services are under pressure, as are rehabilitation and specialist follow up. The link with frequent attendance at primary health care centers in Muscat has also been explored, and is once again indicative of the need to understand service demand and utilization (AlZeedi et al., 2026). Measurable service monitoring is also emphasized in the context of primary healthcare key performance indicators, in the Sultanate of Oman (Al rashidi et al., 2020).

3.9 Evidence Synthesis from Previous Studies:

The reviewed evidence shows that integrating private clinics is of potential value but depends on specific circumstances. Strong governance can be associated with public-private partnership (PPP) to enhance the availability, access to services, waiting time, patient satisfaction, and capacity of services (Basabih et al., 2022; Dove et al., 2025). The evidence on the efficiency and patient-centered outcomes of integration is mixed, and context, incentives, and information systems all are factors (Machta et al., 2019). Service-access benefits are more certain than financial benefits, and should not be assumed without pilot data, as was done with Oman.

The most compelling reasons for Oman to implement private clinic integration are the high public investment, rising burden of chronic diseases, digitization, advanced private service localization and existing quality assurance mechanisms. Uncontrolled implementation is opposed most on the grounds of potential inequity, patient costs, conflict of interest and governance complexity. Based on this, the evidence indicates that the scale up process needs to happen in a pilot format, with plans to assess and implement a gradual approach to national scale up.

10. 3.10 Summary of Key Evidence Themes:

Theme	Evidence from Literature	Implication for Oman
PPP models	PPPs may improve access, quality, waiting time, and service capacity, but financial evidence is less conclusive (Basabih et al., 2022).	Oman should pilot integration with clear financial and quality indicators.
Governance	Good governance is central to PPP success and public accountability (Dove et al., 2025).	Ministry-led regulation and monitoring must be mandatory.
Integration outcomes	Vertical integration has mixed effects on quality, efficiency, and patient-centered outcomes (Machta et al., 2019).	Oman should avoid assumptions and generate local evidence.
Financial sustainability	GCC systems increasingly require health economics, value-based care, and sustainable financing (Nair et al., 2024; AlRuthia et al., 2025; Hamad et al., 2025).	Integration should be evaluated using value-for-money criteria.
Quality and safety	Patient safety and patient experience are central to healthcare quality in Oman and GCC countries (Al-Jabri et al., 2021; Alsubahi et al., 2024).	Quality Assurance Center oversight should guide the pilot.
Digital readiness	Digital systems support continuity, monitoring, referrals, and decision-making (Mohamed et al., 2025; Lai et al., 2024).	Shifa and dashboards should be required for integrated clinics.
Equity risk	PPPs may increase out-of-pocket payment and access inequality if poorly regulated (Kumar, 2022; Alonazi & Alkhawtani, 2025).	Pricing controls and public-patient safeguards are essential.

Oman applicability	Oman reforms emphasize performance assessment, decentralization, HTA, and service improvement (Allawati et al., 2026; Al Rashdi et al., 2024; Lai et al., 2024).	A controlled pilot is more appropriate than immediate scale-up.
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Source: (Allawati et al., 2026; Al Rashdi et al., 2024; Lai et al., 2024); (Mohamed et al., 2025; Lai et al., 2024).

3.11 Oman Health-System Data Relevant to Private Clinic Integration:

Indicator Area	Reported Figure	Technical Meaning	Relevance to Integration
Ministry health budget	Approximately OMR 1 billion	High national financing commitment.	Requires sustainable service-delivery models.
Workforce in 2021	37,732 employees	Baseline health workforce size.	Shows scale of staffing demand.
Workforce in 2025	44,298 employees	Major workforce expansion.	Requires efficient workforce deployment.
Omanisation rate	71.4% in 2025	National workforce localization.	Supports locally governed implementation.
Medicine tender value	OMR 202 million	High pharmaceutical expenditure.	Supports efficiency-focused care pathways.
Tender value in 2023	OMR 149 million	Expenditure growth over time.	Highlights sustainability pressure.
Tender savings	OMR 27.4 million	Procurement efficiency achievement.	Shows value of structured reform.
NCD risk factors	93.1% of adults	High chronic disease risk.	Increases specialist service demand.
Overweight or obesity	64.7% of adults	High metabolic disease burden.	Requires long-term integrated care.
Hypertension prevalence	28.8% of adults	Major cardiovascular burden.	Requires continuous specialist support.
Diabetes prevalence	13.4% of adults	Significant chronic care burden.	Requires diagnostics and follow-up.
Virtual consultations	45,000 in 2025	Digital service expansion.	Supports hybrid service monitoring.
Automated services	57 of over 80	Strong digital transformation progress.	Enables referrals and reporting.
Pharmacy waiting time	40 to 15 minutes	Improved operational efficiency.	Shows redesign can reduce delays.

Emergency waiting time	Reduced up to 40%	Improved urgent-care flow.	Supports innovation.	access-focused
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Source: (Mohamed et al., 2025; Lai et al., 2024).

3.12 Research Gap:

The use of public–private partnerships, financing healthcare, hospital efficiency, patient safety and digital health and health-system reform in the Gulf are well documented. However, there are not yet many direct evidences of a private clinic physically integrated within the government hospital. The actual model presented in this research is limited in evidence; however, there is evidence on other models of PPP, primary healthcare partnerships, laboratory collaborations, hospital construction, outsourcing and vertical integration (Basabih et al., 2022; Dove et al., 2025; Machta et al., 2019). This leaves an important research gap in the Middle East for Oman, as evidence should be specific enough to allow for policy, contracting, pilot design and evaluation.

This academic and practical gap is not limited to just that. Oman's health system has a high level of momentum for public stewardship, digital transformation, quality assurance and health system reform. However, with the increasing burden of chronic diseases, the need for specialist's increases, the cost of pharmaceuticals rises, and staffing increases, sustainable models are required. In this context, the evidence indicates that a more formalized pathway for a pilot exists that evaluates funding efficiency, wait time, patient satisfaction, accessibility, safety, continuity, clinical outcomes and equity before scaling up. This would allow Oman to use the evidence from abroad and to create the local evidence based on Oman Vision 2040.

3.13 Conceptual Framework:

3.13.1 Introduction to the Conceptual Framework:

This study's conceptual framework outlines the potential impacts of private clinic integration on two main outcomes: Funding efficiency and Quality of care. The framework focuses on integration not only as a development of the private sector, but also as a regulated hybrid health care system, where private or semi-private clinics are incorporated into the public hospital facilities, and are supervised by the Ministry of Health. But the model will only be effective if supported by strong governance, quality assurance, digital integration, controls on the workforce, and equity protections (Basabih et al., 2022; Dove et al., 2025; Machta et al., 2019).

3.13.2 Independent Variable: Private Clinic Integration:

The independent variable in this situation is the integration of private clinics in government hospitals. Private or semi-private clinics operate in the premises of government hospitals under formal contract with a clear separation of services, with regulated fees, electronic systems shared and under Ministry supervision. After hours specialist consultations, chronic disease follow-up, rehabilitation, diagnostic services, radiology reporting, or selected outpatient services may be available at these clinics. Public–private models have been found to have a positive impact on access, waiting time, patient satisfaction and service capacity, as evidenced in hospital PPP literature, when they are well-governed (Basabih et al., 2022). However, there is also mixed evidence on vertical integration using results, dependent on incentives and accountability, and organization design (Machta et al., 2019).

3.13.3 Mediating Factors: Governance, Regulation, and Digital Integration:

The framework assumes that the private clinic integration does not directly have positive outcomes unless key mediating factors are present. The first comes from the governance aspect, such as contracts that are clear, accountability, sharing risk, financial auditing, and performance reporting and legal oversight. According to Dove et al. (2025), governance is a crucial factor in the success of PPPs to achieve public health objectives. In addition, according to Dogan Erdem et al. (2024), hospital PPPs may be subject to the risk of contract and management, if the regulation is weak, as revealed in the study.

Quality assurance is the second intervening factor. The Quality Assurance Center forms a crucial national platform for healthcare quality, patient safety, accreditation, standards, risk management and clinical performance monitoring in Oman (Quality Assurance Center, 2024). All integrated private clinics, then, should be subject to the same standards of quality and patient safety as public hospital services. Digital integration is the third mediator. Fragmented care is avoided with shared e-records,

Shifa/PACS integration, referral tracking, billing transparency and dashboards. Mohamed et al. (2025) underscores the significance of the implementation of digital health systems for future healthcare, and Lai et al. (2024) emphasizes performance assessment and reform in the health system of Oman.

3.13.4 Outcome Variable One: Funding Efficiency:

The first outcome measure is funding efficiency. This includes cost-effectiveness, income generation, resource utilization, financial sustainability, minimizing external referrals and maximizing the use of hospital resources. The budget of the Ministry of Health in Oman is estimated to be OMR 1 billion in 2026, while the medicine and sera tender has increased from OMR 149 million in 2023 to OMR 202 million in 2025-2026. These were indicative of sustainable financing and efficient service delivery. Al Subhi (2022) also agrees that it is important to investigate hospital technical efficiency and productivity in Oman. Therefore, the framework suggests the cost of private clinic integration be assessed financially: cost per visit, net revenue, room utilization, equipment utilization, reinvestment in public services.

3.13.5 Outcome Variable Two: Quality of Care:

Quality of care is the second outcome variable. This encompasses the reduction in waiting times, patient satisfaction, specialist access, and patient safety, continuity of care, clinical outcomes and access. Oman's results of the services indicators released recently have shown a significant improvement in waiting times, as genetic clinics reduced waiting time from 8 weeks to 3 weeks, endocrinology reduced waiting time from 6 weeks to 2 weeks, chemotherapy reduced waiting time from 4 weeks to 10 days, spinal surgery reduced waiting time from 12 weeks to 6 weeks, and rehabilitation reduced waiting time from 6 weeks to 2 weeks. The emergency waiting time also decreased by up to 40% compared to 2024, and the emergency congestion in governorates decreased by 30-40%. From these statistics, it can be seen that service redesign can lead to better access. If private clinic integration involves an increase in specialists in the clinics without a reduction in capacity of public clinics, this can also help to improve quality.

Patient satisfaction and safety are also key components of the framework. Al-Jabri et al. (2021) demonstrate the significance of both the patient's and healthcare professional's point of view when considering the quality and safety of healthcare in Oman. Alsubahi et al (2024) also highlight the need for patient-centered quality measures in the healthcare systems in the GCC.

3.13.6 Moderating Risk Factors:

The framework also includes risk factors, which may weaken the linkage of integration to good outcomes. The dangers include inequity, increased out-of-pocket expenses, dual access, and work force conflict, inability to share records, administrative burden, and lack of accountability. Instead of raising out-of-pocket costs, PPPs should improve the public healthcare systems, concludes Kumar (2022). Oman needs to incorporate price controls, public waiting list protections, duty separation among workers and clear rules regarding eligibility.

3.13.7 Final Impact: Alignment with Oman Vision 2040:

The overall impact of the framework will be to move towards Oman Vision 2040. The effective integration of the private clinic needs to support the following domains of financial sustainability, quality improvement, patient-centered care, digital transformation, private sector participation and equity. Nevertheless, this alignment will only be achieved if it strengthens public health care and not lead to uncontrolled privatization. Thus, the framework can be implemented in a controlled manner in a pilot pathway, where the results will be measured at baseline, 6 months and 12 months before the national implementation (Lai et al., 2024; Allawati et al., 2026).

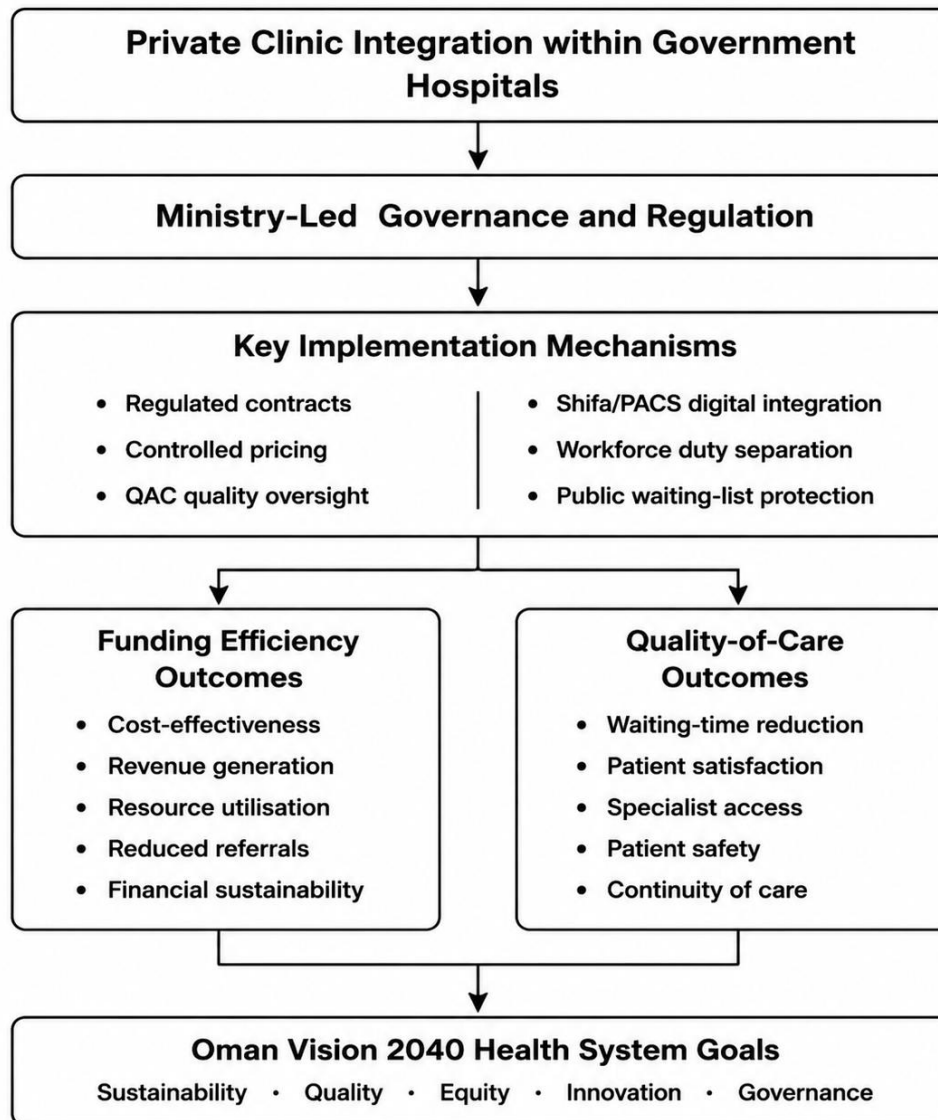
3.13.13 Conclusion:

The literature shows that with suitable structure, with evidence-based, public accountable and regulated format, private clinic integration in government hospitals can increase the efficiency of funding and quality of care. International experiences show that PPPs can improve access, service availability, waiting time, patient satisfaction and operational capacity, but financial benefits are not proven, and should therefore be carefully measured (Basabih et al., 2022). The weak contracts, poor monitoring, unclear accountability and inequity risks are the most consistent success factors, and can prove to be a threat for public-private partnerships (P3Ps) (Dove et al., 2025; Dogan Erdem et al., 2024).

The model is policy-relevant for Oman, where the government is spending much on health services, building up digital systems, improving quality assurance, localizing specialist services and experiencing a high chronic disease burden. It reveals that there is a high demand for health services in Oman, with an estimated health budget of OMR 1 billion by 2026, a total of 44,298 health workers working at the Ministry by 2025, a rate of 71.4% Omanisation, 93.1% of adults having at least one NCD risk factor and there has been progress in the area of waiting times and digital services. These data highlight the need for innovation, and demonstrate why governance and equity should be safeguarded.

Overall picture indicated a tentative shift towards private clinic integration in some government hospitals in Oman. Pilot should be Ministry oriented, digitally enabled, quality controlled, financially transparent and evaluated at baseline, 6-months and 12-months. Some key indicators should be cost-effectiveness, revenue, use of resources, reduction in waiting times, patient satisfaction, clinical outcomes, safety incidents, and continuity of care and equity of access. This evidence-based approach is aligned with Oman Vision 2040 and is a realistic path towards improvement and strengthening of public hospitals without the pitfalls of uncontrolled privatization.

11. Flowchart 1:



4.0 Chapter Four: Results:

4.1 Introduction:

This chapter presents the results of the systematic review examining whether the integration of private clinics within government hospitals can improve funding efficiency and quality of care compared with the normal public healthcare system. The outcomes are presented in a format that is based on the PRISMA process of study selection, characteristics of studies included, funding-efficiency results, quality-of-care results, negative results and applicability to Oman. The evidence demonstrates that, if it is managed well and monitored for quality, public-private healthcare integration can contribute to the provision of service expansion, operational flexibility, reduction of waiting times, access to specialists and utilization of infrastructure. However, the benefits of these models are not assured, and can be mitigated by equity risks, rising patient costs, lack of accountability, administrative complexity, and conflict of interest if they are poorly managed and unregulated (Basabih et al., 2022; Dove et al., 2025; Kumar, 2022; Machta et al., 2019).

The results are also very relevant for Oman as the health system is in the process of reforming its governance, decentralization, digitalization, quality assurance, pharmaceutical security and health-system performance assessment. The policy environment in Oman is already becoming more evidence-informed, with a more effective system of monitoring performance, and a more sustainable financing mechanism, making a carefully controlled pilot model more appropriate for immediate national implementation than for national roll-out (Allawati et al., 2026; Alrashdi et al., 2024; Lai et al., 2024). The outcomes, therefore, support a structured pilot pathway to support Oman Vision 2040 based on measurable outcomes including cost-effectiveness, income generation, waiting time reduction, patient satisfaction, safety, continuity of care and equity.

4.2 PRISMA Study Selection Results:

In the PRISMA selection, process 43 records were identified for screening. Most of the records were identified from the sources such as Google Scholar (n = 31), PubMed (n = 8), and ScienceDirect (n = 4). There were no other records found by the Scopus or Web of Science search, or through further citations. One duplicate record was removed and 42 records remained for title and abstract screening. Eight records were screened out as not being relevant to public-private healthcare integration, hospital efficiency, funding efficiency, quality of care or to Oman policy application. It was then attempted to recover 34 and one report was not recovered. Hence, 33 reports were evaluated for eligibility for full-text. Four were thrown out as they were related to the wrong intervention or model, one for not reporting on funding or quality outcomes, and one for not being public-private integration-focused. Twenty-seven studies were included in the final synthesis.

12. Table 4.1: PRISMA Study Selection Summary:

PRISMA Stage	Number	Result Interpretation
Records identified from Google Scholar	31	Main source of broad policy and academic evidence.
Records identified from PubMed	8	Main biomedical and public health source.
Records identified from ScienceDirect	4	Source for health systems and policy literature.
Total records identified	43	Initial evidence base for screening.
Duplicate records removed	1	One repeated record removed before screening.

Records screened	42	Records assessed by title and abstract.
Records excluded after screening	8	Records not sufficiently relevant to review question.
Reports sought for retrieval	34	Reports selected for full-text retrieval.
Reports not retrieved	1	One report unavailable for full assessment.
Reports assessed for eligibility	33	Full-text reports assessed against criteria.
Full-text reports excluded	6	Reports excluded with documented reasons.
Studies included in final synthesis	27	Final studies included in review results.

The PRISMA results demonstrate that the evidence base was not narratively or selectively constructed, but rather in a methodical way. This will increase the credibility of the findings as the studies included were assessed on relevance to public-private healthcare models, the efficiency of funding, quality of care, governance and applicability to the context of Oman. The application of the PRISMA 2020 principles also facilitates transparent reporting of identification, screening, eligibility assessment and inclusion.

4.3 Characteristics of Included Studies:

The studies included evidence provided on an international level, in the context of the Gulf region, and specifically in Oman. The focus of international studies was on public-private partnerships, hospital PPPs, vertical integration, involvement of the private sector, governance, financing of healthcare, and the performance of hospitals. The research carried out in the Gulf is mainly in the following areas: Healthcare Financing, Value-based Healthcare, Patient Experience, Health Economics and Healthcare Sustainability. In terms of studies specific to Oman, decentralization, hospital technical efficiency, patient safety, healthcare quality, health-system performance assessment, digital transformation, health technology assessment, and workforce development were all studied (Al Subhi, 2022; Al-Jabri et al., 2021; Allawati et al., 2026; Al rashdi et al., 2024; Lai et al., 2024).

Study design varied. These encompassed systematic reviews, literature reviews, quantitative study, health-system assessments, policy reviews, case-based evidence and observational studies. The diversity was expected because the process of integration of private clinics into health systems is a multi-dimensional health system intervention, rather than a clinical intervention. The systematic review and literature review were the best sources directly relevant. The study conducted by Basabih et al (2022) on hospital services under PPPs revealed that having a PPP can positively affect access to services, the quality of services, waiting time, the capacity of services and satisfaction of patients, while financial aspects need to be carefully considered. The quality, efficiency and patient-centered outcomes associated with vertical integration are both mixed and context-dependent, as found by Machta et al. (2019). Dove et al. (2025) have shown that governance is an important factor in the success or failure of public-private partnerships for public health.

13. Table 4.2: Characteristics of Included Evidence:

Evidence Category	Main Sources	Key Result	Relevance to Oman
Hospital PPP evidence	Basabih et al. (2022)	PPPs may improve access, waiting time, quality, and satisfaction.	Supports cautious testing of hybrid hospital models.

Integration evidence	Machta et al. (2019)	Integration outcomes are mixed and context-dependent.	Requires local pilot before national scale-up.
Governance evidence	Dove et al. (2025); Dogan Erdem et al. (2024)	Governance, contracts, and risk allocation determine success.	Supports Ministry-led regulation and monitoring.
Healthcare financing evidence	Mohamed et al. (2025); Sahoo et al. (2023); Shimul et al. (2023)	Sustainability depends on resilient financing and efficiency.	Supports value-based funding decisions.
Gulf financing evidence	Nair et al. (2024); Hamad et al. (2025); AlRuthia et al. (2025)	GCC systems are moving toward sustainability and value-based care.	Supports regional relevance of hybrid models.
Oman efficiency evidence	Al Subhi (2022); Lai et al. (2024)	Oman needs stronger efficiency and performance assessment.	Supports measuring resource utilisation.
Oman quality evidence	Al-Jabri et al. (2021); Quality Assurance Center (2024)	Quality, safety, accreditation, and patient perspectives are essential.	Supports QAC-led quality monitoring.

4.4 Funding-Efficiency Outcomes:

Results suggest that the use of a private clinic and other public-private partnership (PVP) models may improve funding efficiency, as long as financial agreements are public, measurable, and value-based. Cost reduction, revenue generation, infrastructure utilization, operational efficiency, burden on public hospitals and financial sustainability were all considered funding efficiencies in this review. The evidence gathered from all over the world shows that PPPs could improve the capacity of the operations and availability of services in hospitals, although financial results are not as well documented as service results (Basabih et al., 2022). So, do not consider revenue to be a certainty. It needs to be quantified using clear measures like cost per visit, revenue realized by the public health facility, increased outpatient capacity, utilization of clinic rooms, use of diagnostic equipment, avoided referral, patient affordability.

The health-sector indicators back the importance of funding efficiency in Oman. The Ministry of Health budget for 2026 was OMR 1 billion, a large amount of public resources dedicated to health care. In 2021, the Ministry had 37,732 employees; the number of employees increased to 44,298 in 2025 and Omanisation increased to 71.4% in 2025. The pharmaceutical expenditure is also a reflection of financial pressure, increasing from OMR 149 million in 2023 to OMR 202 million in 2025-2026. In the meantime, national and GCC unified tended OMR 27.4 million in savings in 2024 compared to OMR 20.4 million in 2023. The results indicate that Oman is on the road of efficiency in procurement and care-service delivery is required to maintain the increased care.

But Omani data confirms the need for efficiency driven planning. According to Al Subhi (2022), hospital technical efficiency and productivity are vital indicators that can be used to analyze the performance of local hospitals in Oman. Lai et al. (2024) also highlighted the critical need for health-system performance evaluation and health system reform to enhance health system governance, financing and service delivery. Further, the evidence from the region (Saudi Arabia and GCC countries) shows that the demand for sustainable health systems has led to the implementation of health financing reform, strategic purchasing, value-

based healthcare and health economics (Hamad et al., 2025; Nair et al., 2024; AlRuthia et al., 2025). The results support the conclusion that the integration of private clinics should not only be viewed as a revenue generation initiative but also as an assessment of the value of private clinic integration as a value-based financing scheme in Oman.

14. Table 4.3: Funding-Efficiency Results:

Funding Outcome	Evidence Result	Oman Statistic	Policy Meaning
Budget sustainability	Public health spending requires efficiency reforms.	MOH budget about OMR 1 billion.	Integration must support long-term sustainability.
Workforce efficiency	Staffing expansion increases operational pressure.	44,298 employees in 2025.	Workforce deployment must be carefully managed.
Omanisation	Local workforce sustainability remains strategic.	71.4% Omanisation in 2025.	Pilot must protect public workforce priorities.
Pharmaceutical pressure	Medicine procurement is a major cost area.	OMR 202 million tender value.	Efficiency must include care-pathway redesign.
Procurement savings	Structured reform can generate financial savings.	OMR 27.4 million savings.	Supports evidence-based financial governance.
Infrastructure use	PPPs may improve facility utilization.	Not directly quantified in studies.	Pilot should measure room and equipment use.
Revenue generation	Potential benefit, but evidence is mixed.	To be measured in pilot.	Revenue must be reinvested into public care.
Reduced referrals	Local specialist access may reduce external referrals.	To be measured in pilot.	Track avoided referrals and cost savings.

4.5 Quality-of-Care Outcomes:

Results indicate that the outcomes of quality of care are a key element for assessment of private clinic integration. The most robust quality measures found were waiting time, patient satisfaction, accessibility, and patient safety, continuity of care, clinical outcomes and responsiveness. Internationally, there is evidence that hospital PPPs can create positive impact on access, quality, waiting time and patient satisfaction, depending on the quality of governance and implementation (Basabih et al., 2022; Dove et

al., 2025). The evidence also suggests that integration can be beneficial or detrimental to quality, depending on the data systems, accountability, and incentives and care coordination (Machta et al., 2019).

The health-sector indicators reflect significant progress in Oman in reducing waiting times. Waiting time was decreased by 3 weeks in genetic clinics, 2 weeks in endocrinology, 10 days in chemotherapy services, 6 weeks in spinal surgery and 2 weeks in rehabilitation services in 2025. The waiting times in the emergency departments decreased by up to 40% from 2024 and emergency congestion in governorates decreased by 30–40% after the expansion of services. The findings demonstrate that measurable improvements in access can result from a service redesign. The following benefits will be further improved if Private Clinic integration can leverage on these accomplishments by strengthening Specialist Clinics, providing after hours services and improving referral linkages.

Patient satisfaction and patient safety also came out as key quality outcomes. Al-Jabri et al. (2021) illustrated that both the patient and healthcare professionals need to be considered to understand quality of care and safety of patients in Oman. Alsubahi et al. (2024) also found that patients' perspectives are vital in evaluating the quality of healthcare services in the GCC countries. The QAC provides a national accreditation, standards, clinical performance assessment, patient safety and risk management (QAC, 2024). Therefore, patient-experience surveys, complaint monitoring, clinical incident reporting, meeting accreditation requirements, and patient-safety dashboards are all crucial elements of any private clinic integration model in Oman.

Another critical quality outcome is digital continuity. The health-sector indicators reveal that using the QR-codes reduced waiting time in pharmacies from 40 to 15 minutes; over 65% of health institutions were connected with the QR-codes in the PACS/Shifa systems; telemedicine was expanded for six specialties; and more than 57 health services were automated. From the results, it can be concluded that Oman has a good digital infrastructure to support the implementation of the hybrid care model. However, the private clinics in government hospitals should have to share the patient records, have to have a digital referral system, and have to have billing control measures, report patient safety measures, and share outcome dashboards (Mohamed et al., 2025; Lai et al., 2024).

15. Table 4.4: Quality-of-Care Results:

Quality Outcome	Evidence Result	Oman Statistic	Policy Meaning
Genetic clinic access	Waiting time improved substantially.	8 weeks to 3 weeks.	Integration can target high-delay specialties.
Endocrinology access	Waiting time reduced significantly.	6 weeks to 2 weeks.	Supports chronic disease clinic expansion.
Chemotherapy access	Treatment access became faster.	4 weeks to 10 days.	Timely specialist care is achievable.
Spinal surgery access	Waiting time halved.	12 weeks to 6 weeks.	Specialist capacity can improve access.
Rehabilitation access	Waiting time reduced significantly.	6 weeks to 2 weeks.	Rehabilitation may suit hybrid clinic testing.

Emergency flow	Waiting time improved.	Up to 40% reduction.	Redesign can reduce pressure on hospitals.
Governorate congestion	Emergency congestion decreased.	30–40% reduction.	Supports decentralised service expansion.
Pharmacy efficiency	Medication waiting time improved.	40 to 15 minutes.	Digital redesign can improve patient flow.
Virtual consultations	Digital access expanded.	45,000 consultations.	Supports hybrid follow-up services.
Digital integration	PACS/Shifa integration progressed.	65% of institutions.	Shared records should be mandatory.

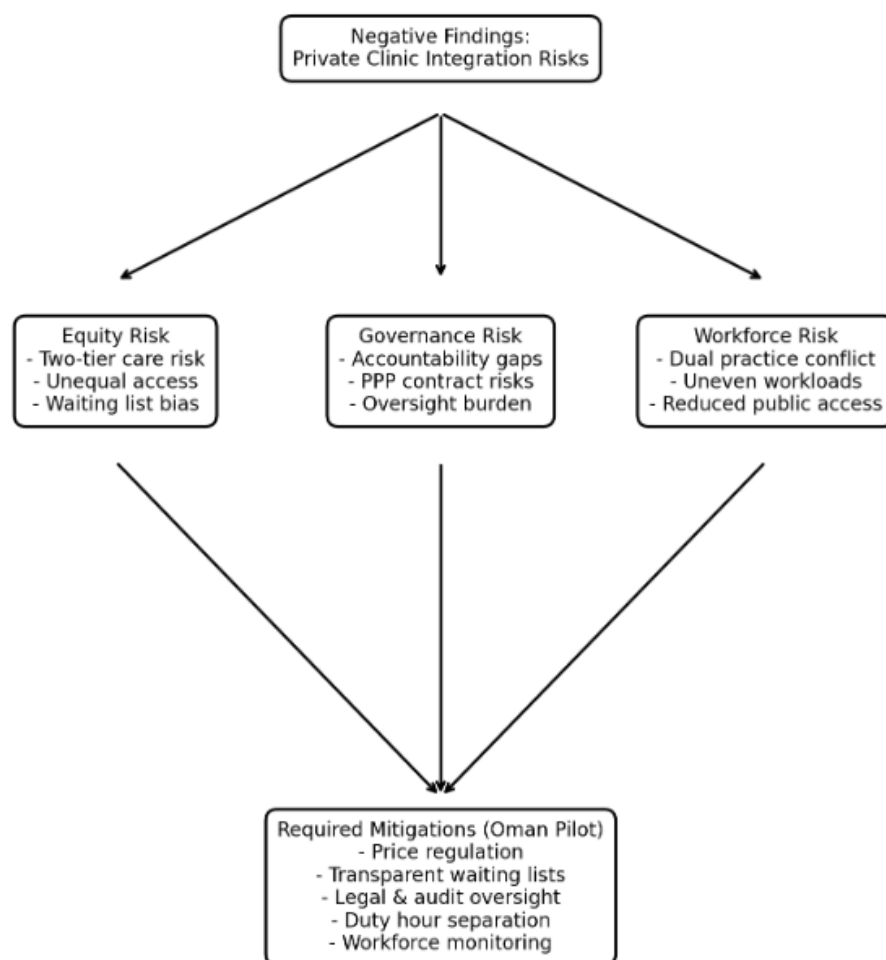
4.6 Negative Findings and Risk Outcomes:

The review identified private clinic integration as having important risks that need to be addressed prior to implementation. The equity risk related results are the most negative. Public hospitals exist to treat those who need medical care, and not those who can afford to pay. The model could lead to two-tier care if private clinics are given quicker appointments to paying patients, but continue to deal with public patients. Kumar (2022) emphasized the importance of using PPP-based models to create a network of public services, rather than straining financial resources, while also reducing OOPE. Furthermore, Alonazi and Alkhawtani (2025) asserted that equity-based financial structures play a crucial role in the Arab healthcare system. A result should be embedded in any pilot in Oman including price regulation, clear criteria for eligibility and transparency in waiting lists.

One of the other key findings was governance risk. Basabih et al. (2022) and Dove et al. (2025) emphasized the importance of governance, transparency and accountability, and the need for the programs to be aligned with the public health goals for the PPPs to be successful. Dogan Erdem et al. (2024) also demonstrated that there can be contract and risk-management issues in hospital PPP projects. It is understood in Oman that the private clinic integration should be the responsibility of the Ministry and backed by legal review, financial auditing, digital reporting, quality assurance and oversight of patient safety. Without this governance system, there can be increased administrative costs and reduced accountability.

One should also consider workforce risk. Private clinics within public hospitals can create a conflict of interest, dual-practice problems, unequal allocation of clinic staff and decreased access to public clinics. This is important because the Ministry's workforce is increasing to 44,298 employees by 2025, with 71.4% Omanisation. A private clinic integration model should, therefore, safeguard the public workforce priorities by introducing private/public duty hour's separation, by monitoring the workloads of private workforce, and by not compromising public services. Oman's workforce planning and role development and evidence-based competencies in the healthcare sector further highlights their importance (Al Jabri et al., 2022; Ismaili et al., 2023).

Diagram 2:



Source: (Al Jabri et al., 2022; Ismaili et al., 2023).

16. Table 4.5: Negative Findings and Required Safeguards:

Risk Outcome	Evidence Result	Oman Statistic	Required Safeguard
Equity risk	PPPs may increase patient costs.	Not directly quantified.	Regulate prices and protect public access.
Access inequality	Two-tier care may emerge.	Waiting times remain measurable.	Monitor public and private waiting times.

Governance weakness	Weak contracts reduce accountability.	Not directly quantified.	Ministry-led contracts and dashboards.
Contract risk	PPP hospitals face risk-allocation challenges.	Not directly quantified.	Legal review and risk-sharing clauses.
Workforce conflict	Dual practice may affect public service.	44,298 employees in 2025.	Separate public and private duties.
Workforce sustainability	Public staffing priorities must be protected.	71.4% Omanisation.	Align pilot with Omanisation planning.
Digital fragmentation	Separate systems weaken continuity.	65% PACS/Shifa integration.	Mandate shared records and referrals.
Safety variation	Different standards create risk.	QAC national oversight.	Unified accreditation and incident reporting.

4.7 Oman-Specific Applicability:

The results indicate that the conditions of the pilot model in Oman are favorable. These are: national quality-assurance infrastructure, digital health transformation, health-system performance assessment, decentralization, workforce expansion, and building up specialist capacity. The Quality Assurance Center offers an institutional mechanism in accreditation, clinical performance assessment, patient safety, standards development and risk management (Quality Assurance Center, 2024). Lai et al. (2024) also suggest that performance assessment, governance improvement and service delivery are key focus areas of health-system reforms in Oman. Allawati et al. (2026) who also emphasize on the need for decentralization and local planning capacity also highlight this.

The true burden of the disease is very strong in favor of innovative outpatient and specialist-care models. The national health indicators for Oman revealed that 93.1% of adults had at least one NCD risk factor, 64.7% of them were overweight or obese, 28.8% had hypertension, 13.4% had diabetes and 27.9% did not have the recommended level of physical activity. These data indicate that there is a ongoing need for chronic disease follow up, endocrinology, cardiology, nephrology, ophthalmology, diagnostics, pharmaceutical services and rehabilitation. Therefore, the most suitable first group of specialties for private clinic integration should be the outpatient specialties with a high demand and measurable waiting time stress.

The localization of specialists in care also considers Oman's professional achievements. Oman has performed the first heart transplant, 38 kidney transplants, 113 corneal transplants, expanded Day Care Oncology to accommodate an additional 250 patients per month and 16 liver transplants in 2025. The results show the Government of Oman's initiatives to reinforce advanced services in the country. Private clinic integration pilots should thus assess the capacity to decrease unnecessary referrals to other services, enhance access to subspecialists and boost utilization of available hospital resources.

4.8 Evidence-Based Pilot Pathway for Oman:

Findings are consistent with a phased approach of piloting the pathway before it is rolled out nationally. This pilot should be started in one or two government hospitals with high outpatient demands, availability of infrastructure, digital readiness and robust quality systems. The lower risk/higher demand services should be offered initially like endocrinology, cardiology follow-up, rehabilitation, radiology reporting support, day-care follow-up, and selected chronic disease clinics. These are suitable areas as Oman currently has measurable indicators of waiting time and high demand for chronic diseases.

The pilot should be organized by a steering committee, which is headed by the Ministry. The committee should be composed of hospital leadership, Quality Assurance Center, finance, legal affairs, digital health, patient-experience units and representatives from the private sector. Pricing, public-patient protection, referral guidelines, clinical responsibility, staff responsibilities, revenue reinvestment, reporting mechanisms, and quality measures should be specified in contracts. Digital integration with Shifa/PACS and performance dashboards needs to be required. Evaluation should be performed at baseline, 6-months and 12-months. This pathway is aligned to Oman Vision 2040 as it contributes to sustainability, governance, digital transformation, quality improvement, equity and patient-centered care.

17. Table 4.6: Pilot Pathway for Oman Based on Review Results:

Pilot Stage	Result-Based Action	Key Indicator	Oman Vision 2040 Link
Site selection	Select high-demand government hospitals.	Outpatient demand and infrastructure.	Efficient service planning.
Service selection	Begin with chronic and specialist clinics.	Waiting time and patient volume.	Improved access and quality.
Governance setup	Establish Ministry-led steering committee.	Approved governance framework.	Strong institutional governance.
Financial model	Apply regulated pricing and reinvestment.	Net revenue and cost per episode.	Financial sustainability.
Digital integration	Require Shifa/PACS and dashboards.	Record-sharing and referral tracking.	Digital transformation.
Quality monitoring	Apply QAC standards and safety reporting.	Incidents, complaints, satisfaction.	Patient safety and quality.
Evaluation	Assess baseline, six-month, and twelve-month outcomes.	Efficiency, quality, equity.	Evidence-based policy reform.

4.9 Result Summary:

The overall findings of the systematic review suggest that private clinic integration in government hospitals is feasible and may help improve funding efficiency and quality of care if done in a regulated, digitally supported, quality monitored and equity protected environment. The most positive results that have been found are in relation to access, infrastructure utilization, reduced waiting time, patient satisfaction and the flexibility of the operation. The most negative are: equity, affordability of care to patients, governance complexity, contract risk, workforce conflict, and continuity of care. Therefore, the evidence is not helpful to uncontrolled implementation or easy privatization. Instead, it is used to aid a well-formed pilot model.

The evidence is strong for the Kingdom of Oman as they already have a lot of public investments, great service enhancements, measurable results, national quality frameworks, digital transformation and oversight by the Ministry. With a budget of OMR 1 billion allocated to the Ministry of Health, a staff of 44,298, 71.4% Omanisation of staff, 45,000 virtual consultations and significant reduction in waiting times, the MOH is ready for structured innovation. Concurrently, the extent of non-communicable disease burden, such as that of 93.1% of adults with one or more risk factors, underscores the need for new service models. The best available evidence-based recommendations are therefore for a phased and limited introduction of private clinic integration to a few hospitals, followed by evaluation based on the following criteria: efficiency, patient experience, equity protected, and accountability of the public sector.

Chapter Five: Discussion and Policy Implications for Oman:

5.1 Introduction:

This chapter interprets the systematic review findings on private clinic integration within government hospitals and explains their relevance to Oman. The evidence suggests that public – private healthcare integration is not always a successful integration and that the impact of public – private integration will vary based on the financing, governance, monitoring, and objectives of public health. The most consistent evidence from the literature is that, if public governance is strong and effective, private sector involvement can improve access, waiting times, service capacity, infrastructure utilization and patient satisfaction, provided that the evidence is measured by a clear indicator of service performance (Basabih et al., 2022; Dove et al., 2025; Machta et al., 2019). If it leads to higher costs for patients, inequities, disintegration of care, conflict of workforce, and/or triumph of private interests over public service priorities, the same model can have negative impacts, however (Kumar, 2022; Dogan Erdem et al., 2024).

The discussion in Oman needs to be related directly to the national health-system situation. The budget of the Ministry of Health in Oman has been boosted considerably, and is projected to reach OMR 1 billion in 2026. In 2021, the health workforce was 37,732 employees, which grew to 44,298 employees in 2025, and Omanisation in 2025 was 71.4%. Financial pressures also are evident in pharmaceutical expenditure, with the consolidated tender for medicines and sera growing from OMR 149 million in 2023 to OMR 202 million for 2025-2026 and a tender saving of OMR 27.4 million against OMR 20.4 million in 2023. Based on these statistics, efficiency improvement, which has been carefully designed, can be seriously considered to address the sustainability pressure and investment capacity in Oman. It thus appears that there is a need for a controlled pilot of integration of private clinics, and not an uncontrolled privatization.

5.2 Interpretation of the Main Findings:

The overall finding is that integration can improve the performance of the healthcare system where it is providing capacity to the public healthcare system and not supplanting the public healthcare system. Basabih et al (2022) found that there was a correlation between hospital PPPs and improved access, waiting time, quality, and length of stay, referral rates, mortality-related measures, and patient satisfaction in several studies. The current evidence suggests integration of private clinics in government hospitals may have a potential role in operational performance improvement in the Sultanate of Oman. However, Basabih et al. (2022) showed that the financial evidence is not as robust, and therefore, the decision-maker must be careful to not take the model's automatic reduction of government spending or net savings for granted. Funding efficiency needs to be measured by quantifiable outcomes like cost per consultation, revenue held by the public hospital, room utilization, diagnostic equipment utilization, impact on public waiting lists, and avoided referrals.

The second important discovery is the role of organizational design in the results of integration. The impact of vertical integration on quality of care, efficiency and patient centered outcomes is found to be mixed and mixed with a negative impact

by Machta et al. (2019). This is an important point because, as stated, “Integration” is not a “one-size-fits-all” intervention. A private clinic within a government hospital can be an after hour's specialist clinic, a partnership diagnostic clinic; a chronic disease follows up clinic, a semi private outpatient service or a contracted service delivery model. There are risks and benefits to every design. The Omani model should, therefore, clearly define the services that are covered, who can participate, how the prices are controlled, how the doctors are paid, how the records are shared, and how the results are monitored.

The third conclusion is that the key is governance. The authors of this study, Dove et al. (2025), found governance to be a key factor in the success of PPPs for public health goals. Governance encompasses accountability, transparency, regulation, contractual clarity, stakeholder engagement and alignment with public health objectives. Dogan Erdem et al. (2024) also noted the high risks involved in contract, long-term obligations and risk allocation in hospital PPPs. This means that Oman should not go the route of a model with lax regulations. Private clinics must be Ministry-managed, legally audited, electronically monitored and quality controlled according to national standards. The Quality Assurance Center already has an institutional base for healthcare quality, patient safety, standards, accreditation, risk management and clinical performance monitoring (Quality Assurance Center, 2024).

18. Table 5.1: Evidence-Based Interpretation of Main Findings:

Main Finding	Evidence Base	Technical Interpretation	Oman Policy Implication
Integration may improve access and waiting times.	Hospital PPPs improved access and satisfaction (Basabih et al., 2022).	Integration adds service capacity when properly designed and monitored.	Use pilot clinics to reduce specialist outpatient delays.
Financial gains are not automatically guaranteed.	PPP financial evidence remains less conclusive (Basabih et al., 2022).	Efficiency requires cost, revenue, and utilization measurement.	Evaluate cost per visit and retained hospital revenue.
Integration outcomes depend on organizational design.	Vertical integration results are mixed (Machta et al., 2019).	Different models produce different efficiency and quality effects.	Define services, eligibility, prices, staffing, and records clearly.
After-hours clinics may increase infrastructure use.	PPPs can improve operational capacity (Basabih et al., 2022).	Existing rooms and equipment can support extended services.	Use public facilities without reducing normal public clinics.

Governance determines whether PPPs protect public value.	PPP governance is central to success (Dove et al., 2025).	Accountability, transparency, regulation, and monitoring prevent misuse.	Establish Ministry-led contracts, audits, and reporting dashboards.
Contract risk can weaken long-term sustainability.	Hospital PPPs face contractual risks (Dogan Erdem et al., 2024).	Poor risk allocation may create financial and operational burden.	Require legal review, risk-sharing clauses, and renewal controls.
Quality assurance must govern integrated clinics.	QAC supports quality and patient safety (Quality Assurance Center, 2024).	Accreditation and safety reporting standardize clinical performance.	Apply national standards to public and private services.
Digital monitoring is essential for safe integration.	Digital health supports implementation and future care (Mohamed et al., 2025).	Shared records reduce fragmentation and improve continuity.	Require Shifa/PACS integration and referral tracking.
Public-sector replacement would create policy risk.	PPPs should strengthen public networks (Kumar, 2022).	Integration must add capacity, not privatize access.	Protect public waiting lists and regulate patient charges.
Local evaluation is required before scale-up.	Oman needs performance assessment reforms (Lai et al., 2024).	Context-specific evidence prevents unsafe national implementation.	Assess baseline, six-month, and twelve-month pilot outcomes.

Source: (Lai et al., 2024); (Mohamed et al., 2025); (Dogan Erdem et al., 2024).

5.3 Why Some Public–Private Models Succeed:

Public-private models work when they meet a specific need of a system and are well managed by the public sector. Evidence from various parts of the world shows that a partnership is likely to be more successful if the private sector identifies the service gap, sets clear goals or targets, regulates prices, monitors quality, and ensures access for vulnerable groups (Basabih et al., 2022;

Dove et al., 2025; Kumar, 2022). Capacity in a PPP could be strengthened through increased capacity in services provided by the hospital, for example by using private sector resources to increase diagnostics, specialist consultations, operating hours etc. But this benefit does not depend on private revenue – it depends on public value improvements.

Reporting, coordination and laboratory functions are well defined and the public–private laboratory model during the COVID-19 storm shows that private capacity can be used to achieve a public health goal. This is the case of TB too, where the private sector has been involved in TB care, showing that the private sector can support access to TB care if the public sector maintains standards, referral systems and reporting and equity controls (Rakesh & Shannawaz, 2024; Suseela & Shannawaz, 2023). The following examples explain why the private sector can be helpful only when the government remains the steward of care pathways, which is applicable to Oman.

The most promising use of private clinic integration in Oman is in the outpatient sector where there is a high demand for services, where waiting periods and specialist pressure can be quantified. However, there is evidence that operational redesign works in Oman as the improvements in waiting times in 2025. The waiting time for genetic clinic was shortened from 8 weeks to 3 weeks; endocrinology from 6 weeks to 2 weeks; chemotherapy from 4 weeks to 10 days; spinal surgery from 12 weeks to 6 weeks; and rehabilitation from 6 weeks to 2 weeks. The emergency waiting time decreased by up to 40% and the emergency congestion in the governorates decreased by 30-40%. The improvements that are demonstrated in this study confirm that if service pathways are re-designed in Oman measurable improvements in access can be achieved. The expansion of this development can be made possible by the integration of after-hours clinics in private clinics, as well as specialist follow-up and diagnostic services under the control of the Ministry.

5.4 Differences between Countries and Relevance to Oman:

Evidence from other countries should be interpreted with caution as there are variations in healthcare system financing, regulation, type of insurance coverage, role of the private sector and patient entitlements. Large-scale hospital projects have various risks in terms of both contract and management, in which Turkey's experience in PPP contracts in hospitals serves as an example. Lastly, the private sector is seen to improve access to disease programs in India and Kerala, but this should be balanced with the quality and reporting requirements of public health institutions (Rakesh & Shannawaz, 2024; Suseela & Shannawaz, 2023). During emergencies, Jordan has witnessed the private sector helping the public sector in providing resources for diagnosis (Abu-Dayyeh et al., 2023). The examples illustrate the importance of having an original approach towards Oman's PPP model rather than copying the model. Rather, Oman should create a model that can fit into its own public funding system, a governance system under the leadership of the Ministry, digital infrastructure, and quality assurance system.

The Gulf context is more transferable as the Gulf countries are all under similar pressures such as government funded health care, increasing chronic diseases, the demand for specialists, the cost of medical technology, and need for sustainable finance. Nair et al. (2024) conducted an analysis of healthcare funding in Saudi Arabia, highlighting the pressing need for reform, sustainability, and financing transformation. AlRuthia et al. (2025) emphasized the growing significance of health economics and value-based healthcare in the healthcare systems of the GCC countries as well. These results suggest that integration of a private clinic in Oman should be considered as a value-based reform and not a mere commercial activity. The model should be evaluated with regard to its ability to enhance access, quality, safety, efficiency and equity at an acceptable cost.

This is of great importance especially in the context of the burden of disease in Oman. According to national health indicators, 93.1% of adult population has at least one factor to increase the risk of non-communicable diseases, 64.7% are overweight or obese, 28.8% suffer from hypertension, 13.4% have diabetes, and 27.9% report low levels of physical activity. The statistics demonstrate a sustained need for services in the following areas: endocrinology, cardiology, nephrology, ophthalmology, rehabilitation, pharmacy services, diagnostics and chronic condition follow-up. Thus, a private clinic integration pilot should start with outpatient and chronic-care clinics rather than high-risk clinics like emergency and intensive care clinics.

19. Table 5.2: Country Differences and Relevance to Oman:

Country/Context	Evidence-Based Finding	Technical Interpretation	Relevance to Oman
Turkey	PPP hospitals face contract and management risks (Dogan Erdem et al., 2024).	Large PPPs require strong risk allocation mechanisms.	Avoid complex contracts without Ministry oversight.
Jordan	Private laboratories supported public COVID-19 diagnostics (Abu-Dayyeh et al., 2023).	Private capacity can strengthen emergency diagnostic response.	Use private support under public reporting systems.
India	Private TB engagement requires quality controls (Suseela & Shannawaz, 2023).	Private delivery needs public standards and surveillance.	Mandate clinical reporting and quality assurance.
Kerala	Private-sector access improved under structured programs (Rakesh & Shannawaz, 2024).	Public coordination protects universal access goals.	Integrate clinics through regulated referral pathways.
Saudi Arabia	Financing reform supports sustainability transformation (Nair et al., 2024).	Gulf systems require value-based funding models.	Evaluate integration through cost and outcomes.
GCC region	Health economics is increasingly important (AlRuthia et al., 2025).	Value-based decisions support sustainable healthcare reform.	Treat integration as value-based reform.
International systems	PPP outcomes differ across financing systems.	Insurance, regulation, and entitlements affect transferability.	Design Oman-specific pilot, not copied models.

Oman NCD burden	NCD risk affects 93.1% of adults.	Chronic disease demand drives specialist-service pressure.	Prioritize chronic outpatient integrated clinics.
Oman obesity burden	Overweight or obesity affects 64.7% of adults.	Metabolic risk increases long-term service demand.	Expand endocrinology, cardiology, and rehabilitation pathways.
Oman chronic conditions	Hypertension 28.8%; diabetes 13.4%; inactivity 27.9%.	Chronic diseases require continuous multidisciplinary follow-up.	Avoid first-phase emergency or intensive care integration.

Source: (Lai et al., 2024); (Mohamed et al., 2025); (Dogan Erdem et al., 2024).

5.5 Comparison with Existing Healthcare Policies in Oman:

The results align with Oman's existing trajectory of moving towards health-system performance assessment, decentralization, digital transformation and quality improvement. Lai et al. (2024) highlighted the importance of health-system performance assessment and reform in Oman, highlighting the need for measurable indicators prior to the implementation of large-scale programs. Al Subhi (2022) assessed hospital technical efficiency and productivity in Oman, and found that efficiency and resource utilization measures can be used to assess hospital performance. Allawati et al. (2026) tested the decentralization in Oman, which reinforces the notion to consider the needs at the governorate level and the capacity of the services offered at the governorate level.

The proposed hybrid model is also in line with Oman Vision 2040, given its commitment to sustainability, quality enhancement, digitalization, private sector involvement and patient-centred service provision. However, if Vision 2040 is to be realized, the model must make efforts towards equity and public accountability. A model that merely accelerates the care for paying patients is in opposition to the goal of public health care. A system where money spent on regulated services is reinvested into the public system, thereby decreasing waiting lists and improving service quality and keeping public access open would be more in line with national goals for reform.

Digital indicators improve policy readiness in Oman. QR code medication dispense reduced time spent in the shop from 40 minutes to 15 minutes. 45,000 virtual consultations were provided, 65% of health institutions joined to PACS/Shifa, telemedicine was expanded in six specialties, and 57 services were automated in 2025. Mohamed et al. (2025) have identified the following as digital health in the healthcare systems: digital health, e-guidance, implementation barriers, and future prospects for digital health in healthcare systems. Digital systems are essential to private clinic integration, and these systems must be utilized for patient-safety reporting, billing transparency, outcome dashboards, shared records and tracking of referrals.

Table 5.3: Comparison with Existing Healthcare Policies in Oman:

Policy Area	Evidence from Oman	Technical Meaning	Hybrid Model Implication
Performance assessment	Oman prioritizes health-system performance assessment (Lai et al., 2024).	Reforms require measurable indicators before scale-up.	Pilot must measure efficiency, quality, and equity.
Hospital efficiency	Technical efficiency assessed in Omani hospitals (Al Subhi, 2022).	Resource utilization is central to performance evaluation.	Track rooms, staff, equipment, and costs.
Decentralization	Governorate-level planning is increasingly important (Allawati et al., 2026).	Local service capacity differs across regions.	Select pilot hospitals using local demand.
Vision 2040 alignment	Reform supports sustainability, quality, and innovation.	Health services must remain equitable and accountable.	Integration must strengthen public healthcare access.
Public accountability	Public care should not favour paying patients.	Two-tier access would weaken public values.	Protect public waiting lists and eligibility.
Revenue reinvestment	Regulated income can support public services.	Financial gains should return to hospital improvement.	Reinvest revenue into public care pathways.

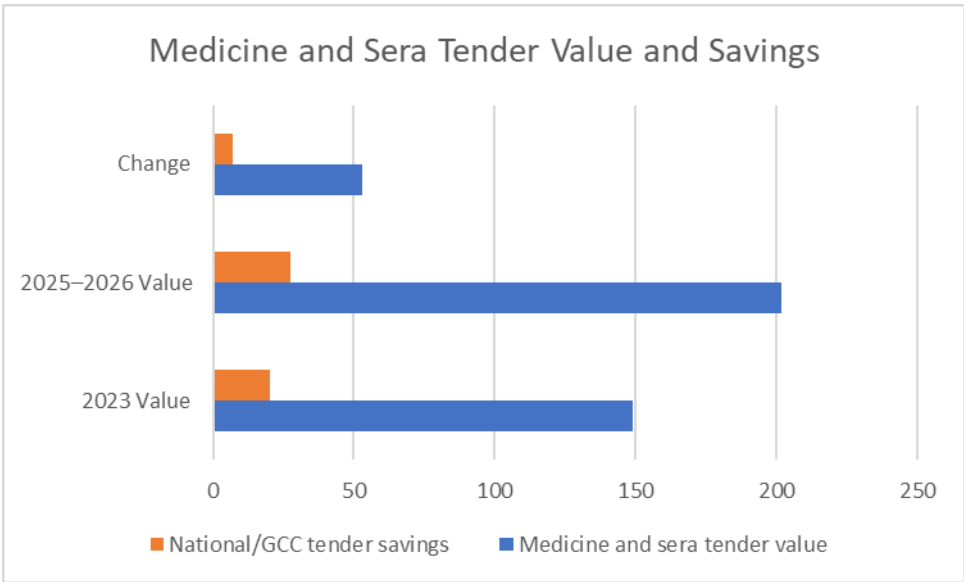
Digital dispensing	Pharmacy waiting reduced from 40 to 15 minutes.	Digital redesign improves patient flow efficiency.	Use technology to manage hybrid workflows.
Virtual care	45,000 virtual consultations delivered in 2025.	Digital access supports outpatient service expansion.	Add virtual follow-up for integrated clinics.
Shifa/PACS integration	65% of institutions connected to PACS/Shifa.	Shared records support continuity and monitoring.	Require integrated electronic records and referrals.
Service automation	57 services automated in 2025.	Automation supports transparent administrative processes.	Use dashboards, billing controls, safety reporting.

Source: (Al Subhi, 2022); (Allawati et al., 2026); (Lai et al., 2024).

5.6 Policy Implications for Funding Sustainability:

The main implication of the study is that the inclusion of private sector clinics as a financing and efficiency mechanism should be explored in Oman instead of an alternative to public sector funding. The overall Ministry of Health (MOH) budget is approximately OMR 1 billion which is a strong commitment by the government, but with an increasing demand for services and pharmaceutical costs, it is necessary to optimize the use of resources. The increasing trend in medicine and sera tender from OMR 149 million in 2023 to OMR 202 million in 2025-26 is a fact. A positive OMR 27.4 million saving accounts for the financial value that can be gained from structured reforms in the meantime.

20. Graph 4: Medicine and Sera Tender Value and Savings



This graph supports funding-efficiency discussion and shows why financial sustainability is important.

The pilot, therefore, should measure direct and indirect financial effects. The direct outcomes should include revenue produced, cost per visit, cost per completed episode of care, staff cost, billing accuracy and net financial contribution to the public hospital. Indirect outcomes should include Reduction in waiting time, avoidance of unnecessary referrals, improved use of clinic space, reduction in repeat visits, quicker diagnostic turn around, reduced pressure on external treatment. Barraza-Lloréns et al. (2025) highlight that hospital performance by efficiency and quality should not be studied separately as efficiency without quality may lead to "false savings. Hence, it is not possible to evaluate the pilot in Oman based on revenue.

5.7 Regulatory, Workforce, and Governance Implications:

Boundaries of a hybrid model need to be established in regulation. How the service is offered in private within public hospitals, what fee it can charge, how it will safeguard public patients, how clinicians will be credentialed, how complaints will be dealt with, and how the funds generated will be reinvested into the service should be decided by the Ministry of Health. According to Kumar (2022) PPP models should not increase the financial burden on patients but should focus on regulating out of pocket expenses and strengthening of the public systems. This is directly applicable to Oman and should continue to be given high priority to public hospitals, as access should be on a need basis.

Protection of the workforce is also very important. The Ministry workforce increased from 37,732 in 2021 to 44,298 in 2025, and Omanisation reached 71.4%. A private clinic integration model should not distract clinicians from public services and create unfair access, that is, dual practice. The job description, working hours, public and private duties, remuneration and workload monitoring of all staff members who work in integrated clinics should be clearly defined. In the healthcare sector, Ismaili et al. (2023) and Al Jabri et al. (2022) argue the importance of workforce planning, professional role development and evidence-based competencies in the context of the healthcare system in Oman. A Ministry led steering committee should consist of the hospital management, Finance, Legal Affairs, digital health, Patient Experience, Quality Assurance Center and representation from the private sector to handle governance. Accreditation, clinical standards, safety reporting, patient complaints, and quality dashboards should be the responsibility of the Quality Assurance Center (QAC) (Quality Assurance Center, 2024). Baseline, six- and twelve-month evaluation. Scale-up should only be considered when the pilot is effective and equitable with no additional burden to equity and public clinic capacity.

5.8 Recommended Pilot Implementation Pathway:

- **Pilot Site Selection:** Select 1 or 2 government hospitals with a high outpatient demand, digital readiness, and quality systems, or a combination of these, to participate in a controlled pilot for 12 months.
- **Service selection:** Start with high volume, low-risk services such as endocrinology, cardiology follow-up, rehabilitation, radiology reporting support and chronic disease review.
- **Baseline data:** Document baseline data on waiting times, patient numbers, clinic room utilization, staff workload, patient satisfaction, diagnostic turnaround, referral completion and cost per visit.
- **Governance and access protection:** Run integrated clinics in well-defined time slots, have public and private waiting lists, protect public clinic capacity, common electronic access systems.
- **Evaluation and scale up:** Ensure that waiting times, patient satisfaction, safety, continuity, financial transparency and public access are enhanced at 6 and 12 months and scale up only if they are.

6. Chapter Six: Conclusion, Limitations, and Future Research:

6.1 Conclusion:

Private clinic integration in government hospitals in Oman may be a good solution to improve funding efficiency and quality of care provided, but it must be regulated, Ministry led, digitally integrated, quality monitored, and equitable. The evidence is not favorable to uncontrolled privatization or to a national rollout. However, the evidence is more compelling for a pilot pathway that is well designed with measurable financial, operational, and quality, safety, and equity indicators (Basabih et al., 2022; Dove et al., 2025; Machta et al., 2019).

The overall impact of integration will depend on how well the model will improve the capacity of public health systems. Positive outcomes include increased use of hospital facilities, access to specialists, reduced waiting times, increased patient satisfaction, increased diagnostics access, controlled income generation and reduced pressure on public OP departments. However, there are potential drawbacks such as access problems at various levels, higher patient costs, administrative burden, risk of bias and conflict of interest, burden of the workforce, and data fragmentation and lack of accountability (Kumar, 2022; Dogan Erdem et al., 2024). Therefore, it has to depend on the good governance to be implemented.

The evidence is favorable for feasibility, both in terms of the need and readiness indicators are positive for the Kingdom of Oman. Expansion of public investment, growth of workforce, national quality structures, digital transformation, measurable improvements in waiting times and high demand from chronic diseases. Oman has the institutional capacity to implement a hybrid approach, as evidenced by OMR 1 billion Ministry budget, 44,298 health workers, and 71.4% Omanisation rate, and significant improvements in waiting times were noted with 65% of PACS/Shifa integration. At the same time, the prevalence of non-communicable disease (NCD) (93.1% of adults with at least one risk factor) underlines the need for greater capacity building in specialists and chronic care.

6.2 Strengths of the Review:

This is the first strength of this review, as it is based on international, Gulf and Oman specific evidence. International experience exists in the outcomes, governance, integration, risk and measurement of the quality of PPPs. Financial reform and value-based healthcare are relevant to the Gulf context, as evidenced by the Gulf context. The Gulf context is applicable to the financial reform and value based healthcare. There is evidence that is locally relevant, such as hospital technical efficiency, health-system performance assessment, quality and patient safety, decentralization, digital transformation and workforce development (Al Subhi, 2022; Al-Jabri et al., 2021; Allawati et al., 2026; Lai et al., 2024; Mohamed et al., 2025).

The second strength is the systematic structure in the review, which is in line with PRISMA 2020. Fifty-seven records were found, one duplicated, 42 screened, 33 of which were assessed as full-text, and 27 studies were included in the synthesis. This open selection process enhances the credibility of the results and helps to avoid the selection of a few results and present them in an optimal light.

The third advantage of the review is that there is no bias towards PPPs being successful as such. It is essential for differentiating between the potential benefits and risks of implementation. When making a policy recommendation, decision makers should be aware of uncertainty regarding costs, equity, governance risks, workforce implications, and administrative challenge. The review therefore argues for piloting rather than scaling up on a national level a politically popular but unproven reform.

6.3 Limitations of the Review:

The first is that there is a limited number of studies that directly focus on the integration of private clinics in government hospitals in the Gulf region. The evidence is mainly related to the use of PPPs in a wider form, vertical integration, hospital partnerships, primary healthcare PPPs or private sector engagement on disease-specific PPPs. This does not allow for direct generalizability to Oman, and highlights the importance of a local pilot before scaling up to the national level.

Heterogeneity is the second. The studies are heterogeneous in country context, health care financing, services provided, population and outcome, and measurement. Examples in Turkey, Jordan, India, Saudi Arabia and other international reviews are illustrative of lessons that can be learnt, but there are differences as well as similarities in the regulations, insurance systems, maturity of the private sector and public-service entitlement (Abu-Dayyeh et al., 2023; Dogan Erdem et al., 2024; Nair et al., 2024; Rakesh & Shannawaz, 2024). This implies that the results need to be carefully translated into the Omani context.

The third is financial outcomes are less consistently reported than access and quality outcomes. In the studies conducted on PPP hospitals, there were some service-performance benefits, which could be observed, but the financial evidence was not as strong, according to Basabih et al. (2022). Therefore, the conclusion of this review should not be taken as a fact that integration of private clinics will save public money. It can be concluded that financial efficiency can be achieved and that there can be measurable indicators to test it.

The fourth restriction is the possibility of publication bias. Compared to failed or controversial public-private partnerships, successful public-private partnerships are more likely to be published. Benefit overstated and risk understated. The fifth limitation was that a meta-analysis was not appropriate because of the different designs, interventions, setting and outcomes used. Narrative synthesis was thus the most appropriate method.

6.4 Future Research Needs:

More studies should be undertaken to develop evidence for Oman. The most important study in the future would be a prospective pilot evaluation in selected government hospital to integrate private clinic to the government hospital. The following measures should be collected in this study at baseline, 6-months and 12-months: waiting time, patients' satisfaction, staff workload, and cost of visit, net revenue, patient affordability, referral completion, safety incidents, complaints, diagnostic turnaround, and public clinic access.

Patient and staff opinions should be investigated in future studies. Al-Jabri et al. (2021) proposed that both patients and health care professionals are important in the study of quality and patient safety in Oman. Therefore, patient experience surveys, staff interviews, complaints analysis and safety culture assessments should be included in future assessments. Research also needs to be done to determine if the model affects equity: waiting times and outcomes for public patients need to be compared with those who go to a private clinic.

The second area of research priority is the economic evaluation. This is directly relevant as Alrashdi et al. (2024) calls for the development of Oman's health technology assessment, which should be assessed for value for money before it can be scaled up, as a private clinic is being integrated. Cost-effectiveness analysis, budget impact analysis, and value based purchasing will be needed for future studies. This would provide more evidence for decision makers if the model is helping to improve sustainability.

6.5 Final Recommendation

The last recommendation is for the national implementation of private clinic integration without pilot evidence in Oman. On the other hand, Oman should implement a pilot project in government hospitals for one year, which will be regulated. The pilot should be aligned with Oman Vision 2040 and be designed based on 6 principles: Ministry stewardship, protected public access,

regulated pricing, QAC quality oversight, digital integration with Shifa/PACS and evidence-based evaluation. The strategy would enable Oman to determine if integration of the private clinics could enhance funding efficiency, quality of care, and avoid inequity, cost escalation, workforce conflict, and fragmented care.

Slow-scale-up would be warranted if the pilot would be successful in reducing waiting time, improving patient satisfaction, increasing revenue transparency, improving resource utilization, making better access to specialists, improving safety and continuity without compromising patient safety. When the pilot is seen to be creating inequities, reducing the availability of public services, making services more expensive to patients, or causing issues in governance, the model must be redesigned or abandoned. This conditional approach is the most solid and evidence-based pathway for Oman and it will preserve values and principles of public healthcare while allowing innovation, sustainability and private sector participation in the public healthcare space, with Oman in charge.

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